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ORIGINAL LECTURES.

THE TREATMENT OF GASTRO-INTESTINAL CATARRH IN INFANTS, WITH ESPECIAL REFERENCE TO IRRIGATION OF THE INTESTINES.

A Clinical Lecture delivered at the Woman's Medical College of Philadelphia.

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FROM the many terms employed to designate a disease characterized in infants by inflammation of the digestive tract, with diarrhœa, fever, and exhaustion often resulting fatally, the name gastro-intestinal catarrh has been chosen as best describing the pathology of the affection and embracing all grades of its severity. Cholera infantum may fairly designate cases not frequent in which the severity of the affection and rapidly fatal result closely simulate Asiatic cholera.

We shall obtain a better understanding of the pathology of this disease if we first consider some points regarding normal digestion in infants. It has been shown by Koch that lactic acid is wanting in the gastro-intestinal tract of patients dying with Asiatic cholera, and it might reasonably be inferred that lactic fermentation is part of the processes of normal digestion. Recent studies by Baginsky and Leo have confirmed this inference so far as the digestion of infants is concerned. The stomach of the newborn child does not contain pepsin as an active ferment, but digests by the action of lab ferment and zymogen, and when cow's milk is taken hydrochloric acid is secreted in excess. The lactic fermentation or hydro-lactic acid digestion is present normally, and it is not this process, but a further acid fermentation resulting in the change of the neutral lactates to butyric acid, with the formation of acetic acid and acetone, which is pathological; the digestion of starch, casein, and albumin is checked simultaneously with the formation of the acetic compounds.

The bacteria, whose presence accompanies the lactic fermentation, are adjuvants in normal digestion, and their activity is not to be checked; it is the excessive formation of bacteria arising through failure of the inhibitory function of the lactic bacteria which is to be combated. Examination of the adult stomach reveals the presence of bacteria in abundance, whose function in normal digestion is to aid in splitting up ingested foods. There are, then, bacteria and bacteria, some benign and adjuvant, others malignant and destructive, according to the part they bear in aiding or hindering digestion.

Regarding the causation of gastro-intestinal catarrh, its active cause is most often irritating food; its predisposing causes are those which favor vaso-motor paralysis and blood-stasis in the digestive organs, as exposure to cold and the depressing effect of heat on the vaso-motor centres. And the severity of a given attack of this disease will depend upon the presence and potency of the active cause in addition to the predisposing causes. An infant exposed to a sudden cool change in summer may suffer from congestion of the digestive organs, with transudation of serum and hypersecretion of the mucous membrane of the digestive tract; if the child's food be lessened and be free from fermentation and irritating matter, nature soon cures the case with a few loose stools which relieve congestion and cause the gastro-intestinal catarrh to cease. If, however, upon this condition of blood-stasis and hypersecretion the acetic bacteria and irritating products of their activity be grafted, a general gastro-intestinal catarrh results attended by the rapid growth of bacteria and structural lesions of a grave nature.

Distinguishing, therefore, between the predisposing and active causes of the disease in question, we find that the most important factor in producing active causes is heat. When the average temperature for twenty-four hours is so high as to favor the decomposition of the albuminoid envelope of the fat drop which forms the milk globule, milk ceases to be an unirritating food and becomes an active irritant and conveyer of pathogenic bacteria. Milk is ordinarily taken from the cow early in the morning, and delivered to the consumer before 9 or 10 A.M. When the night temperature rises disease caused by irritating milk increases; in early autumn it is less frequent so soon as the nights become cool although the days are warm. Not only is milk affected by heat, but the water of ponds, lakes, and rivers contains an increased quantity of fermented material and bacteria so soon as the night temperature permits the continuous decomposition of vegetable and animal albuminoids contained in leaves and twigs, and in the bodies of birds and fish. Milk and water under certain average temperatures are very liable to become active causes of gastro-intestinal catarrh.

The pathology of these cases varies from that of simple blood-stasis and transient hypersecretion to the development of well-marked ulceration of the large intestine with profound anæmia of vital organs and passive congestion in the cerebral sinuses. In cases which seem to survive the disease only to perish later in collapse, no gross lesion is found sufficient to explain the fatal issue, and marasmus expresses our ignorance of the pathology of these cases. It is not improbable that atrophy of the gastric tubules resembling that found in adults in pernicious anæmia is present in such cases. Examination of the stools in cases attended by intestinal lesions reveals undigested food, pus, and bacteria in abundance; when chemically examined fat is present in increased quantities, showing failure of pancreatic digestion.

The symptoms of a compensatory catarrh following simple congestion are moderate fever, restlessness, thirst, and frequent liquid-yellow stools often containing mucus. In severe cases fever becomes high, restlessness is well

marked; thirst excessive; profound anæmia soon discloses itself; stupor, coma, or convulsions, a clammy skin, and relaxed sphincters precede death. Stools are very frequent, watery, serous or very dark in color; green, or chocolate, or coffee-ground in appearance, and sometimes extremely fetid. In considering the color of a stool, its color immediately on passage should be noted, as the bile compounds assume darker hues on oxidation in the diaper, which may mislead. In rapidly fatal cases, styled cholera infantum, the picture of Asiatic cholera in the adult is reproduced in miniature. Extreme prostration, "rice water" stools in rapid succession, cadaveric appearance, clammy skin, and death in coma decide the fate of the child in a few hours; there is little time to study the stages of disease, and therapeutic expedients are tried in vain.

In discussing the treatment of gastro-intestinal catarrh in infants, prophylaxis is of major importance. The fact that congestion of the abdominal viscera, with simple hypersecretion of the digestive mucous membrane, furnishes the most favorable condition for the development of serious disease, should not be overlooked. The child's skin should be kept in a condition of healthy activity, fitting it to withstand changes of temperature, by regular baths in tepid water; thin flannel should be worn next the skin, covering the child's body and limbs to the wrists and ankles. The expedient of European residents in India may be adopted, and an abdominal band of flannel worn beneath the shirt. It will be found much more healthful and comfortable to discard outer wraps in hot weather, and clothe the child entirely in flannel, using as few garments as possible. So clad, an infant may pass the greater portion of its day in the open air with little danger of taking cold. The hygiene of the child's dwelling is also of great importance. Air space, freedom from decaying vegetable and animal matter, and immunity from conditions preventing sleep, are essential.

But especial attention should be paid to the infant's ingesta. Infective material should be excluded or neutralized in food and drink. Water should be filtered and boiled before given as a beverage or with milk. Milk should be sterilized, by apparatus designed for that purpose, or by boiling. All albuminoid food liable to decomposition should be thoroughly heated; the many "teas" mixed for infants by meddlesome women are abominations. The nursing-bottle should be frequently scalded, washed in water containing soda, and the rubber nipples should be kept in a saturated solution of borax. When apparatus for sterilizing milk is not available, it may be boiled in a glass fruit jar, which is placed in a pan of water upon the fire; the impervious lid may then be applied, and the milk set away to cool until needed.

It is far better, however, to sterilize milk in the bottle from which the infant feeds. Numerous sterilizers are in the market, the essential principle of all being the same. They consist of a tin or wire rack holding bottles containing milk, which rests upon a shoulder or ledge several inches above the bottom of a closed tin box. The bottles having first been sterilized by boiling water or dry heat, are partially filled with milk, or milk and boiled water. They are then corked by a rubber cork perforated for a glass stopper. The glass stopper is withdrawn, the bottles placed in the closed tin box, which contains three or four inches of water, and the whole is heated until the water boils for half an hour. The process should be watched as the water heats to boiling, and when that point is reached the glass stoppers are replaced in the rubber corks, and the bottles thus sealed. The bottles are set aside to cool.

When needed for feeding, a teaspoonful of a good extract of malt is added to 4 to 6 ℥ of milk and the bottle is heated in water to a proper temperature, a freshly cleaned rubber nipple is substituted for the rubber cork, and the infant receives its meal from the vessel in which it was sterilized without exposure of the milk to the air. This process may be simplified by substituting for the rubber cork a plug of cotton sterilized by heat. Cotton plugs are in common use as air filters to prevent the access of bacteria in culture experiments, and their use seems indicated to close vessels in sterilizing milk. Extract of malt is preferred to sugar because less likely to ferment.

In hospitals and homes, where a number of children are collected, all diapers should be disinfected by immersion in a solution of bichloride of mercury, 1 to 5000 or 10,000. With every precaution stools are retained in the diaper for varying periods, and it is well to prevent the sporulation of bacteria during this time. For the child's person, strict cleanliness is necessary; finely powdered boracic acid may be used to advantage as a toilet powder when a tendency to excoriation exists.

The active treatment of a simple congestion of the digestive mucous membrane, with compensatory catarrh, should be the withdrawal of food for several hours, a warm bath, and a free supply of boiled water in small quantities as a beverage; should prostration threaten, whiskey and water, or aromatic spirits of ammonia and water, may be given. It is especially true of infants that loss of fluid is felt severely, and a few liquid stools in a young child cause distinct depression. If nature does not move the bowels promptly, castor oil may be given.

Should vomiting of curded milk occur, with pronounced gastric irritation, the stomach may be washed out to advantage. A small soft catheter (No. 8), a short piece of glass tubing, and a longer rubber tube and small funnel are sufficient, the glass tubing connecting the catheter and rubber tubing and serving as an index of the passage of fluid. Boiled water containing a little sodium bicarbonate or sodium salicylate (gr. 1 to ℥ 1) may be employed. The tongue is gently but firmly depressed with the index finger of the left hand, and with the right the oiled catheter is passed backward and downward; meeting resistance a pause is made, the catheter rotated gently, and usually enters the œsophagus without difficulty. The fluid should be poured into the funnel very gently, and allowed to return by siphonage, until it returns clear.

Although gastric ulcer and rupture of the stomach are uncommon in infants, yet in a recent series of experiments made by my friend Dr. Bennett, physician in charge of the Sea Side Home, Atlantic City, to determine the probability of rupturing the gastro-intestinal tract by irrigation, he found on the cadaver that the few cases of rupture occurring on post-mortem irrigation were in the stomach, where beginning ulceration existed. Gastric irrigation should be made with great gentleness and patience, and should be undertaken only when gastric irritation is pronounced. The omission of one or two meals may be followed, if symptoms disappear, by a re-

sumption of sterilized milk and water in diminished quantities; skimmed mutton broth or white of egg water may be employed if milk is not tolerated at once.

Should the case go on to well-marked intestinal catarrh with enteritis a more decided policy must be adopted. An effort should at once be made to remove irritating ingesta from the intestines, to prevent the growth of bacteria, and to feed and support the patient in every possible way. An intestinal antiseptic is indicated, and from experience calomel seems best fitted for an early stage of the disease. In $\frac{1}{10}$ or $\frac{1}{20}$ grain doses, with soda or milk sugar, it may be given every hour or half hour until the stools show a free secretion of bile. For the first six or eight hours food should be replaced by teaspoonfuls of whiskey and boiled water or Jacobi's mixture of white of egg and whiskey and water, care being taken that fluid in *small* quantities is taken very freely. Temperature may be reduced by the warm or hot bath, a cold cloth upon the head. A spice plaster upon the abdomen may often be used to advantage. If pain and restlessness, with fever, are not controlled by the bath antipyrin in one-half grain doses may replace opium to advantage.

If the antiseptic action of Nature's intestinal antiseptic the bile and calomel are not sufficient to check the growth and invasion of bacteria, intestinal irrigation should be promptly undertaken, *before* prostration supervenes. A soft catheter (No. 11), a connecting glass tube, and fountain syringe are needed. The fluid may be boiled water made alkaline by sodium bicarbonate; thymol 1 to 1000, or sodium salicylate gr. 20 to ℥ 20 of water (the last is highly prized by Dr. Bennett). Through the courtesy of Dr. Waterman, of the clinical staff of the College, I have a case in which intestinal irrigation is indicated. The child is laid across the lap of the nurse who receives it on its abdomen upon a rubber sheet gathered into a pail below. Placing the back of the left hand against the child's nates the oiled catheter is introduced by the right hand and pushed gently into the bowel. As it advances it is held by the thumb and finger of the left hand while the right rotates it; if a decided obstruction presents, it is slightly withdrawn and then advanced.

The catheter may be introduced six or eight inches without difficulty; the fountain syringe should be held from two to three feet above the patient and fluid allowed to flow freely. The temperature of this fluid should be from 90° to 110° F.; if the child is in collapse, a hot irrigation is a decided stimulant. The quantity of fluid may vary from ℥ 20 to a quart and a half; in collapse, after the fluid returns clear several ounces of hot water or hot whiskey and water may be introduced into the bowel for absorption to decided advantage. As you see in the patient before you, while the introduction of the catheter may be resented the passage of fluid is a positive comfort, and it is not an unusual occurrence for infants to fall asleep on the nurse's lap while receiving intestinal irrigation and sleep for an hour or two, the temperature falling considerable. The pressure of the child's body as it lies prone upon the nurse's lap secures a free return flow of fluid, and there is little danger of doing violence to the intestines, for the abdominal wall is undergoing distention and not the intestine, as shown in Dr. Bennett's experiments. Intestinal irrigation may be employed twice daily without injury to the patient, and even more often in urgent cases.

Should the case become chronic, naphthaline or salol may be given to advantage; salol, with mercury and chalk, has served me well. But the maintenance of the patient's strength, the removal of irritating ingesta, the preservation of the conditions most favorable for the circulation of blood, avoidance of passive congestion, and finally the gradual reëstablishment of digestion, these form a problem requiring the most painstaking attention to each case. The fortunes of these little patients are decided often in a few hours, and having tided them over an acute attack a restoration to health may now follow speedily.

If not, the problem of nutrition is first to be solved. Mutton, veal, and chicken broth; flour ball; barley water; junket; a good extract of malt; English breakfast tea and rum (a favorite stimulant for children with Continental physicians), warm milk from the cow have all benefited individual cases. Change of air may turn the tide when nothing else will. Arsenic, in small, but steadily increasing doses, with olive oil, almond flour, or butter may be tried. Oil inunctions are also useful. The peptonizing and pancreatizing powders sold by druggists are often useful in pre-digesting milk.

But it is my experience and conviction that your success in treating gastro-intestinal catarrh in infants will depend more upon your clear understanding of the causes of the disease and the way to avoid them; your knowledge of its pathology, and your close study of each case and intelligent use of the simplest and most direct methods of antiseptic and supporting treatment than in the drugs you employ or the particular brand of artificial food used. You may not increase the profits of the manufacturers and dealers of patented foods, but it will be to the profit of your patients.

ORIGINAL ARTICLES.

VULVO-VAGINITIS IN CHILDREN.

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IF we recall for a moment a few points concerning the anatomy of the external female genitals in childhood, we will observe that they are unprotected by hair, the nymphæ are relatively more prominent and protuberant than they are after puberty, both the large and the minute glands are less active functionally than in mature life, and the entrance to the vagina is less conspicuous and is more or less obscured by the hymen. As Leishman remarks, the conformation suggests the greater importance of the urinary, compared with the genital organs, during the developmental period of the structures of the body. But it also means that the external genitals, with increased susceptibility to infection during childhood, are more exposed, should opportunity for infection arise. In other words, an opportunity which in a child would result in vulvo-vaginitis might not so result in an adult.

The infectious element may be communicated

either to the vulva or the vagina and the resulting inflammation extend in either direction, but for reasons which are obvious the vulva is more likely to be first involved. Either vulvitis or vaginitis may exist alone, but more frequently the infectious disease which begins with the vulva does not end there. In adults this disease not infrequently extends to the uterus, the Fallopian tubes, the ovaries, and the peritoneum, and may end fatally. I can find but one recorded case in which such extension occurred in children, but it seems to me extremely probable that many of the deformed and undeveloped uteri with which are associated so much dysmenorrhœa and anguish, sterility and domestic unhappiness are the legitimate consequence of vulvo-vaginitis in early life.

If this is so, an increased responsibility is laid upon mothers and family physicians that the disease be not ignored from feelings of false modesty or any other consideration. Modesty is, indeed, one of the most beautiful attributes which human beings possess, but it is a false and utterly unworthy sentiment when it interferes with the present or prospective well-being of the one for whom it is exercised. Confidence in the ability and integrity of a physician is one of the first requisites in the relations which subsist between physician and patients; in fact, how can one do his full duty if this confidence is withheld? Not until this is more fully realized and practised can we hope for that powerful interference in the beginnings of disease which will enable us to anticipate more serious resulting disorders, and not until then can our children be properly equipped physically for the responsibilities of maternity with all that is therewith implied for the family and the State.

Vulvo-vaginitis is not in all cases the result of infection; it may be associated with and be the expression of various constitutional vices, it may be caused by traumatism of various kinds and degrees, or it may be due to the influences of parasites other than the parasitic microörganisms of infectious disease. When we consider the susceptibility of infants and children to infection, and the fact that so many of the diseases which are common among them are now believed to be the result of an infectious agent, we are prepared to admit that by far the larger number of cases of vulvo-vaginitis are of infectious origin. The disease may be congenital—an infant may be as readily infected with this disease by its mother during parturition, as with ophthalmo-blenorrhœa, and there are few, if any, who will now question the possibility of the latter. That it is less common than ophthalmo-blenorrhœa is probably due to the fact that breech presentations are far less common than vertex presentations, though I am prepared to believe that vulvo-vaginitis may be contracted even in cases in which the head presents. The congenital form of the disease may also be associated with such exanthemata as measles and scarlet fever which not infrequently develop during fœtal life.

The infectious character of the disease is well demonstrated in various epidemics which have been observed in recent years. Von Dusch reports such an epidemic which he observed in the Heidelberg hospital for children in 1886, and again in 1888, the disease being contracted in nearly half the cases after the children had entered the hospital (*Deutsche med. Wochen.*, 1888, p. 831). Other similar epidemics have been reported by Suchard (*Rev. mens. des Mal. de l' Enf.*, 1888, p. 265); Sarazin (*Rev. mens. des Mal. de l' Enf.*, May, 1884); Tischendorf (quoted by De Amicis, *Lyon Méd.*, October 26, 1884); Cséri (*Pester Med. Chirur. Presse*, 1885, No. 1); Fränkel (*Virchow's Archiv*, xcix. p. 251), Bouchut, and Atkinson (quoted by von Dusch, *loc. cit.*).

The traumatic form of the disease may be due to self-inflicted injury, as in masturbation, the introduction of stones, sticks, or shells into the vagina, to falls and blows, and, in some cases, to more or less successful attempts at rape. There is no crime which excites public sympathy and indignation more than rape, and there are few which have a severer penalty; it is, therefore, imperative that the physician who is called upon for an opinion should approach such cases in the calmest judicial spirit, that he may not be the instrument of injustice to accuser or accused.

The etiology of the parasitic form, at least as it is ordinarily given in the text-books on pediatrics, furnishes the opportunity for scepticism. As high an authority as Baginsky speaks of the migration of *oxymi* from the rectum into the vagina, where they deposit their *ova*, which, when developed, give rise to vulvo-vaginitis. Other authorities mention similar migrations on the part of other varieties of intestinal worms with like results. This may be possible, but I agree with Reeves Jackson in expressing scepticism concerning it. It would seem as if the irritation from worms in the rectum, with the resulting mucous discharges dripping upon the anus and external genitals, the rubbing and irritation of dirty fingers would suffice for the production of the disease.

Baginsky's classification of this disease, which is practically that of Vogel's, is a good and comprehensive one, and includes (1) the catarrhal and gonorrhœal variety, (2) the phlegmonous, (3) the diphtheritic, (4) the gangrenous. I have preferred to modify this into (1) the simple catarrhal, (2) the gonorrhœal, (3) the phlegmonous, (4) the diphtheritic. The catarrhal may be entirely distinct from the gonorrhœal, and the gangrenous is only a stage of the phlegmonous, with perhaps some exceptions.

Simple catarrhal vulvo-vaginitis is the most common variety of the disease. No one who practises obstetrics or pediatrics to any extent fails to see it. A. Jacobi speaks of seeing it in hundreds of cases (*Arch. of Ped.*, 1886, p. 336). It may occur in newborn infants or at any period of childhood. It may be due to various causes, and is far more common among the poor and in hospitals than among those who are well-to-do and are particular about the habits and physical condition of their children. The modern gospel of cleanliness is teaching us the fallacy of the old theory that nature cannot be improved upon, if we consider those nearest nature who herd together like the animals and are equally oblivious with them as to their personal appearance and their home surroundings. It is always the poor, the ignorant, and the dirty who suffer most from "the pestilence that walketh in darkness and the destruction that wasteth at noonday." And so we would look for vulvo-vaginitis and find it in the crowded tenement-house—not so often among those who are well-informed and prosperous. Reference has already been made to its presence in hospitals, and I wish strictly to exclude, in this connection, the gonorrhœal variety, of which several hospital epidemics have been reported. If gonococci are found with the discharges, the disease must be gonorrhœal, though the original source of infection may not be traceable, or else the microörganisms are morphologically identical with gonococci, but of different characteristics. The latter is Fränkel's theory in answer to the objection that in a large number of cases of what was apparently simple catarrhal vulvo-vaginitis gonococci have been found (*Virchow's Arch*, xcix., 1885, p. 251). If it is decided that morphological characteristics are of no value, or of little value, in threading the mazes of bacteriology, it must intensify the difficulties of a study that is already extremely intricate.

The most evident symptom in this variety of the disease is a white or colorless discharge, which is secreted in part by the muciparous glands of the vulva and vagina, and is in part a transudation from the bloodvessels. Intense irritation follows the drying of this discharge upon the skin surrounding the external genitals. The scratching and rubbing of these parts by dirty and germ-laden fingers may cause the development of phlegmonous vulvo-vaginitis. Swelling, or urethral irritation, or glandular disturbance in the inguinal region are not accompaniments of the simple catarrhal variety of the disease.

The cause may be any irritant injury, such as was alluded to in a previous paragraph, a constitutional disease, such as syphilis, rhachitis, or scrofula, want of cleanliness, with accumulation of secretions, etc. It has been observed repeatedly in conjunction with measles and scarlet fever. It is probably a portion of the eruptive process of these diseases, and kindred to the condition which affects the mucous membrane of the eyes, nose, and mouth. Von Dusch (*loc. cit.*) thinks that scarlet fever predisposes to vulvo-vaginitis, and a similar opinion has been expressed by others.

The duration of the disease depends largely upon the conditions with which it is associated. If it accompanies a constitutional disease like rachitis or scrofula it may continue indefinitely or until the general condition is decidedly ameliorated. If it accompanies an acute disease it may not last more than a week or two after treatment has been begun, and treatment is, as a rule, inadmissible until the acute disease has subsided. There are certain cases, especially in dispensary practice, in which the cause cannot be satisfactorily traced, which continue a long time chiefly because they are brought to the physician only at long intervals, and in the meantime his directions are most inefficiently carried out. Such cases furnish no criterion as to the susceptibility of the disease to rapid and complete cure.

Gonorrhœal vulvo-vaginitis is preëminently an infectious disease, and its cause has been so frequently traced to the cause which produces gonorrhœa in the adult—namely, the gonococcus of Neisser—that it is safe to say that this point in its pathology is settled. Even if the microbes are not found, and it is not always an easy matter to find them, the presence of the clinical phenomena of the disease, and especially a history of contact, direct or indirect, with one who has been infected, is sufficient for a diagnosis. Thus we find in the records of hospital cases reported by Fränkel, de Amicis, von Dusch, and Suchard that the disease was transmitted from a few or even a single case which was brought into the hospital for treatment, and that in a short time large numbers of children were suffering with the disease. Upon investigation no adults with this disease were discoverable in the surrouundings of these children. It was found, however, in several of the reports that the children in each hospital were bathed in the same tub, upon the same day; that there was a common stock of soap and towels; and that the attendants were not of superior intelligence, nor particularly discriminating in separating those who were infected when brought to the hospital from the uninfected. With our present knowledge of the insidiousness of such diseases no further investigation in such cases would seem to be necessary. Dirty water-closets, beds and bedding, and other articles of hospital or bedroom furniture are other means by which this disease may be transmitted with great facility. Walker reports (*Arch. of Ped.*, 1886, p. 269) twenty-one cases in which there was a history of contact with parents who had

the disease or with other infected persons who had committed assault and rape.

Allusion has already been made to congenital cases, especially in breech presentations, in which infection was accomplished during parturition. As in simple catarrhal vulvo-vaginitis, the secretion upon the external genitals is usually the chief symptom, but in the gonorrhœal variety it is purulent, the same as in adults, except in very mild cases, and in its later stages. Fränkel, having found only small quantities of epithelium in the secretions which he examined, concluded that the disease does not give rise to the same pains and erosions as in the adult, but this cannot be considered an universal rule, for others, including myself, have found it accompanied with great pain; and as to the erosions, it is often impracticable and almost impossible to examine with sufficient thoroughness to decide as to that, unless the child is anæsthetized at each examination.

I have found the clinical phenomena in acute cases closely resembling those which I have described in former papers concerning this disease in adults. (See *New York Med. Journ.*, Jan. 10 and 24, 1885, and Oct. 17 and 24, 1885.) The external genitals are swollen, the mucous membrane has an appearance resembling wet hemlock sole leather, there is exquisite sensitiveness to the touch, and there is sometimes severe pain in urination. Suchard reports cases in which the inguinal glands were enlarged and painful. Hatfield (*Arch. of Ped.*, 1886, p. 64) has seen similar cases, and reports one in which peritonitis resulted. The disease may therefore follow the same course as in the adult.

In common with other observers, I have found that it may be very intractable and rebellious to treatment, even continuing for months. The medico-legal bearings of many of the cases of this disease give it an importance in such lines which no other disease in childhood has.

Phlegmonous vulvo-vaginitis, as it is usually seen, is due to traumatism. The traumatism may be accomplished in the greatest variety of ways. It may be self-inflicted, or result from accident, or be due to intentional violence at the hands of others. According to Vogel (*Lehrbuch der Kinderkrankheiten*, 1880, p. 431), the gangrenous condition may accompany or follow typhoid fever, diphtheria, measles, smallpox, and scarlet fever. We should expect such a condition to occur, if at all, among children who are poorly nourished and badly cared for, like that analogous condition, *noma*, which sometimes effects the side of the mouth. Fortunately, the condition is a rare one, at least in this vicinity. According to Baginsky, the phlegmonous variety may develop from the catarrhal, but I do not think this would be apt to occur unless a traumatic or infectious element were added.

It is not always easy to differentiate the phlegmonous from the gonorrhœal variety. Indeed the two may coexist, as in cases of rape in which great violence has been used, and in which the criminal suffered with gonorrhœa at the time the assault was made. It is scarcely necessary to dwell upon the course of the disease, which is that of phlegmonous inflammations in general. It is accompanied by great pain, and may result in the formation of pus.

Diphtheritic vulvo-vaginitis—that is, the condition in which a false membrane forms in the vulvo-vaginal region, with more or less destruction of tissue—is by no means limited to diphtheria, although as an essential part of that process it may best be considered in connection with diphtheria. Any morbid condition in which the blood contains an excess of fibrin or fibrinogenous material, may develop diphtheritic vulvo-vaginitis, especially if any abrasion of the skin or mucous membrane exists. It is sometimes seen in connection with typhoid fever and scarlet fever (Baginsky), and Vogel has seen it most frequently during and after epidemics of measles, especially in the damp and crowded dwellings of the poor. It necessarily results in gangrene, to a greater or less extent, and among the illy nourished children of the poor, with bad hygienic surroundings, it means a septic condition which will be likely to have a fatal issue.

As to the question of treatment, whatever be the variety of vulvo-vaginitis, the treatment resolves itself into antisepsis and cleanliness, and perhaps it may some day be demonstrated that these are identical terms. It is not designed to convey the impression that the treatment should be exactly the same in all the varieties of the disease, for any one with even a limited experience knows that the same substances do not produce the same results in all cases. The personal individuality factor enters every therapeutic equation, and this, alas, is often very deceptive and spoils our calculations.

I have seen cases of vulvo-vaginitis in which the patients were apparently in robust health, but this is not the rule, and we must not approach this subject without premising that something is to be given to affect the general condition.

Whether there be coexisting acute disease, or the common constitutional vices, scrofula, rhachitis, or syphilis, the hygienic surroundings are first to be made as favorable as possible, and then the substances which, for want of a better name, are called tonics are to be liberally administered. Whether the choice be iron, mercury, the iodides, or the vegetable bitters, they are too well known and appreciated to require more than a passing notice. I believe there are none of these cases which would not do well by the seashore, and one of the greatest blessings of modern times to children are the *sani-*

taria which have been established at home and abroad for sick children, by the sea. If these could be multiplied manifold, how changed would be the statistics of infantile mortality and morbidity.

For local treatment cleanliness is a *sine qua non*, and yet it is often impossible to impress upon mothers the importance of so cleansing the entire tract involved that recovery can take place. During the stage of acute inflammation, intravaginal injections cannot be given. This would appear to be self-evident in the phlegmonous and diphtheritic varieties, but they are equally contraindicated in the gonorrhœal variety. When the acute symptoms have subsided, a small well-oiled nozzle attached to a fountain syringe is to be introduced within the vagina at least two inches, twice daily, and a gentle current of water at a temperature of 95° to 100° F. allowed to flow in and out for five to ten minutes. Simple boiled water is sufficient for thorough cleansing, but there is no objection to using instead mild solutions of carbolic acid, boric acid, sublimate, salicylic acid, or chloride of sodium. I do not think that these antiseptic solutions add materially to the efficiency of the injections when properly given, and it must be remembered that the epithelium in these cases is exceedingly tender, and that violence will only be likely to increase the inflammation. Most children will resent this treatment, but if a pad of absorbent cotton suitably moistened with a five per cent. solution of cocaine be first applied to the external genitals for five minutes, the injections may be made painlessly.

In the catarrhal and gonorrhœal forms, two drachms of a two per cent. solution of nitrate of silver should be injected into the vagina every other day, excess being carefully wiped away with small pledgets of absorbent cotton. The external genitals should also receive similar applications with a soft brush or pledget of absorbent cotton at the same time. In the intervals a pad of absorbent cotton, which has been moistened with a mixture of bismuth and glycerine (1 : 8), should be placed against the external genitals and secured with a T-bandage. Circumstances will indicate the frequency with which this should be changed.

If the urethra and bladder become involved, mild alkaline or simple emollient diuretics should be given. With children it is not usually well to use local applications, nor are they usually indicated to these organs.

As these means of treatment which have been referred to will usually suffice if carefully employed, it is deemed superfluous to mention other possible systems of treatment. Should pus form in the phlegmonous variety, the usual principles of antiseptic surgery are applicable. Diphtheritic and gangrenous tissues must, of course, be removed as soon and as carefully as possible, and I know of no antiseptic dressing which is less irritating in such cases than the bismuth and glycerine mixture, or even bismuth alone.

159 EAST THIRTY-SEVENTH ST.

OBSERVATIONS ON THE UNITY OF PHTHISIS AND TUBERCULOSIS.[1]

BY G. C. HUBER, M.D.,
ASSISTANT DEMONSTRATOR OF ANATOMY IN THE UNIVERSITY OF MICHIGAN.

DR. AUSTIN FLINT, the author of the article on "Phthisis Pulmonalis," in *Pepper's System of Medicine*, introduces his discussion on the pathology of pulmonary phthisis in the following words:

"There are two distinct varieties of morbid products in cases of phthisis—namely, the miliary granulations and the infiltrated deposit formerly distinguished as crude tubercle."

And then he further states that "histological investigations have failed to establish an essential distinction between the two varieties. The fact that they are so constantly associated shows some close pathological connection."

Dr. Payne, in his work on *General Pathology*, published last year, makes the following statement in speaking of these diseases:

"Tuberculosis of the lungs, or pulmonary phthisis, is by far the most common disease. Here we recognize two forms, distinguished by the manner in which the poison is introduced into and distributed through the organ."

He further states, that "we have two chief forms of tuberculosis, ordinary phthisis and infective tuberculosis; these forms may be combined, the latter being developed out of the former or even *vice versâ*."

Dr. Bristowe, in the latest edition of his work on *The Theory and Practice of Medicine*, holds the same views.

As these may be taken to represent the most modern views on this subject, I undertook, under the direction of Prof. Gibbes, an investigation into the appearances presented by the lungs of those cases which he had in his laboratory. They were twenty-one in all.

The methods pursued in the investigation were the following: Portions were taken from various parts of each lung, sections cut from these, and a large number stained, mounted, and examined. On comparing the appearances found in these cases, together with the clinical histories, they naturally resolved themselves into the following classification: Six were cases of acute miliary tuberculosis; nine were cases of tuberculosis; one a case of caseous phthisis; and five were fibroid phthisis.

The first six cases come under the head of acute

[1] Read before the Michigan State Medical Society, May 9, 1889.

miliary tuberculosis, because the duration of the disease was from two to four weeks and the lungs were studded with miliary tubercles. These six cases did not all present the same appearances under the microscope, although to the naked eye they were identical, and their clinical histories were very similar. In three the tubercle consisted of a reticular fibroid tissue, having one or more giant cells in it and the larger ones having a necrosed centre. In the three others the tubercle contained no structure, but were merely masses of broken-down caseous material. Every section showed the same structure, and in no instance, out of the very large number of sections examined, were these two forms combined. In those lungs where the formation was tubercular, every tubercle presented the reticular formation. In those lungs containing caseous tubercles, each one consisted of a mass of disintegrated amorphous material.

The next nine cases come under the head of tuberculosis, from the fact that the disease had existed for periods varying from eighteen months to three years, and the lesions in the lungs were those of reticular tubercle. The appearances varied very much in the different cases; all the lungs contained cavities varying in size and distribution.

But in those parts of the lungs where the disease had not advanced far enough to form a cavity the structure could be readily made out. It consisted of aggregated reticular tubercles with necrosed centres. The structure of these was identical with the reticular tubercles already described in acute miliary tuberculosis.

One case came under the head of caseous phthisis from the fact that the disease (although the history in this case is not perfect) was known to have existed nine months before death, and all the morbid changes in the lungs were those of caseous degeneration. More than two hundred sections of these lungs were examined and in not one of them is there the slightest trace of any reticular formation. They all show masses of broken-down material, varying in size, and in some parts cavities were formed in these.

The remaining five cases come under the head of fibroid phthisis, on account of the long duration of the disease, the contracted condition of the lungs, and the large amount of fibrous tissue they contained. In four of these cases it was evident that the fibroid change had been set up by the consolidation of croupous pneumonia, which had not undergone resolution. Small tracts of the lungs showed the typical appearances presented by croupous exudation, the fibrinous coagulum in the air cells, the walls of the air vesicles remaining, but all being in a necrosed condition. Some larger tracts had broken down and formed cavities.

The fifth case was that of a woman aged seventy, and there was no history to show what had caused the fibroid change in the lungs, but from the microscopical appearances it was evident that the case was a very chronic one, and the induration had been going on for a long time. From these cases I will leave out the last five; namely, those of fibroid phthisis, as they do not bear directly on the subject of this paper. This will leave sixteen cases, which will come directly under the heads of tuberculosis or caseous phthisis, and which should, according to the authorities I have already quoted, show reticular tubercles or caseous masses indiscriminately mixed.

That this is not the case I have abundant proof in the large number of sections examined, and I can positively state that no section of any of these lungs showed appearances which gave the slightest difficulty in placing it under one or the other of these heads. The two forms never occurred in the same lung. Now the question I wish to put is this: Could I take sixteen cases of lung diseases without the slightest selection and find that they all presented distinct features, either of caseous degeneration or tubercular formation, which features were in no instance intermixed, if the statements made in the before-mentioned text-books were correct?

This seems to be such an important question that I have ventured to bring it before the Society as a matter which ought to receive further investigation.

OBSERVATIONS ON SULPHONAL.

BY C. W. KAVANAUGH, M D.,
OF GAINESVILLE, TEXAS.

SULPHONAL seems destined to occupy a stable and prominent place among the hypnotics. The reports concerning it have so far, for the most part, been favorable, and I have noted in reading but two cases of poisoning reported from its use. The details of these were meagre. One was a morphine-eater suffering with nervous prostration. Ataxia was present but did not last long. In experiments with dogs ataxia was constant, but this is the first case where it was manifest in the human. The other case was in a person affected with chronic myelitis accustomed to the nightly use of chloral. Sulphonal being substituted produced an exanthem lasting two days. Antipyrin caused the same in a sister of patient. Both cases recovered without any special treatment.

I desire to give a brief report of three cases illustrating some of its properties.

CASE I.—Male, aged thirty. I was called to see him in the beginning of a severe attack of enteralgia. He was suffering with acute pain, vomiting continually. The patient having abstained from the use of morphine for over a month and not wishing to revive his old habit, I concluded to try

sulphonal. I administered thirty grains, which were retained, and in twenty minutes patient was asleep. Sleep lasted six hours. Patient was drowsy for half a day, but expressed himself as feeling well.

CASE II.—Male, aged forty, came to me seeking relief for a severe headache the result of alcoholic excess. I prescribed forty-five grains of sulphonal. He went to sleep in twenty-five minutes and slept seven hours. No pain in the head on arousing. This patient had used morphine to excess for years.

CASE III.—Female, aged thirty-five, had been a great sufferer for several years with "bilious headache," having two attacks each month. The pain was very acute and relief could only be obtained by the inhalation of chloroform. During these attacks the stomach would retain nothing. Two months ago I administered at the beginning of one of these attacks thirty grains of sulphonal. Sleep followed in twenty minutes, lasting five hours; some pain still remaining, I gave fifteen grains more. This relieved the pain, but produced no sleep. Drowsiness lasted one day. Since this attack patient takes fifteen grains on manifesting symptoms of her trouble and has so far succeeded in aborting attacks. This patient, too, was addicted to the morphine-habit.

I have selected these cases out of many in which I have used sulphonal, on account of their addiction to the morphine-habit, as it has been stated that sulphonal has no effect during abstinence from morphine in those addicted to the morphine-habit. This is in direct contradiction to my own experience and that of others to which I will refer.

Dr. W. H. Flint, of New York, finds the effect of sulphonal particularly good in patients who had previously been addicted to the use of opium and other hypnotic drugs or were suffering from insomnia due to the withdrawal of these remedies; and Dr. Ruschugh Jena has obtained excellent results in the case of a morphine-eater.

Ott, of Prague, relates a case of hypochondriasis with arthritic disposition and temporary arhythmia of the heart, and the patient was accustomed to the injection of morphine. He slept well after the administration of thirty grains of sulphonal and the arhythmia always ceased a few minutes after its use.

The results from sulphonal in insane asylums has been exceptionally good. It has been found to be of special benefit in cases of self-pollution. I have used sulphonal in typhoid fever for nervousness and to produce sleep, and it met these troubles better than any agent I have ever used. I noticed no effect on the circulation or temperature.

In rheumatism it relieves pain much better than antipyrin.

In comparison with chloral and the modern remedies paraldehyde and urethan, the following advantages are apparent. Unlike chloral it does not depress the heart or irritate the stomach, but seems to have a sedative influence on the latter, and it is very easy to take, being in this respect much superior to paraldehyde, which is very disagreeable and its nauseous taste may continue long after its administration. Urethan is very uncertain in its action, and the reports concerning it indicate that it possesses very little virtue.

Sulphonal is a reliable hypnotic, has anodyne and analgesic properties. Its effects are quick and certain and it is practically free from bad after-effects. The majority of patients express a feeling of well-being after its use.

As regards the dose, I find thirty grains sufficient to produce sleep. It is odorless and tasteless, and therefore can be administered in powder. In repeating the dose it must be borne in mind that it is eliminated very slowly.

MEDICAL PROGRESS.

Hydracetin, a New Antipyretic.—DR. PAUL GUTTMANN, in the meeting of the Berlin Medical Society of May of this year (see report in *Wiener med. Presse*, No. 21, 1889), reported the results of his investigations with hydracetin, a new antipyretic. The drug is a white powder, odorless and almost tasteless, soluble in water only in proportions of one to fifty, however easily soluble in alcohol. Four to eight grains injected into a rabbit's peritoneum caused the animal's speedy death. Autopsy showed that death was caused by the powerful reducive and absorptive effect the drug had on the oxygen in the blood. Doses of one and one-half to two grains a day were sufficient to reduce the temperature 2° to 3½° F., and to cause profuse perspiration. One dose would keep the temperature down for five or six hours, after which it rose again with moderate rapidity. Guttmann has used the drug in a large number of cases of typhoid fever, phthisis, scarlatina, erysipelas, acute miliary tuberculosis, septicæmia, and also in eight cases of typical and severe multiple acute articular rheumatism. The action of hydracetin was always the same and accompanied with positive results. In acute articular rheumatism doses of less than a grain gave almost immediate relief to the pain which lasted for several hours. Hydracetin found further use in two cases of psoriasis in which a salve containing ten per cent. of the drug was used for less than a week, complete recovery resulting. In two cases of sciatica one-grain doses of hydracetin had a most happy anodyne effect, which lasted for several hours. No unpleasant accompanying or after-effects were ever observed to follow its use, further than a slight and temporary pallor of the face. Guttmann is of the opinion that not more than one and a half or two grains should be given daily. In cases of severe fever, such as typhoid, the above amount should be given in one dose, or in two doses an hour apart from each other. In articular rheumatism two daily doses of about three-quarters of a grain each seemed to be followed by the best results. The daily administration of one and a half or two grains should not be continued for over three days; after an interval, however, its use may again be resorted to. The

drug is equally valuable either as an antineuralgic or an antipyretic.

Petroleum Soap for Itch.—The following is recommended by DR. H. EMERY, of Paris, in the *Revue gén. de Clin. et de Thèr.*, May 16, 1889, as most efficacious in obstinate cases of itch:

℞.—Petroleum	. . . .	50 parts.
White wax	. . . .	40 "
Alcohol	. . . .	50 "
Soap	. . . . .	100 " —M.

Rapid Cure of Chorea by Antipyrin.—According to DR. LEGROUX, in the *London Medical Recorder*, May 20, 1889, fifteen-grain doses of antipyrin, given three times a day, is a most speedy and effectual remedy in chorea. He has cured six cases within a month. Legroux's experiences are substantiated by GRIM, in the *Centralbl. für Nervenheilk.*, page 148, 1889, and also by LILIENFELD, in the *Centralbl. für die med. Wissenschaften*, page 784, 1887, who have also reported similar favorable cases.

Grafts of Frog's Skin in Chronic Ulcers.—In the *Rüsskaia Meditzina*, DR. FEODOSY NESTEROVSKY, of Bratzlav, speaks favorably of frog's skin-grafting, a method which was first proposed by Dr. Allen in 1884, and subsequently practised successfully by Drs. O. V. Peterson, of St. Petersburg,[1] Perez, Baratoux, Dubousquet-Laborderie, etc. Dr. Nesterovsky relates four cases of old-standing, intractable, extensive, and deep ulcers of the leg, foot, and thigh, where, after all ordinary means had failed, the transplantation of grafts of frog's skin was invariably followed by a permanent healing in from nine to fourteen days. Dr. Nesterovsky takes an ordinary water frog and keeps the lower portions of its body immersed in a sublimate solution (1:1000) for five minutes; then he pinches up a piece of skin on the abdomen with forceps, and cuts out as many grafts as are required, each the size of a finger-nail. Having washed the pieces as well as the ulcer with a 4 per cent. solution of boracic acid, he carefully places the grafts on the granulating surface, and covers the part with a layer of boracic gauze and a piece of tow, fixing the whole with wax-cloth and a starched gauze roller. The dressing is changed and the ulcer washed first on the third or fifth day. The writer summarizes his experience as follows: 1. In all cases of extensive and badly cicatrizing ulcers, skin-grafting is indicated. 2. Skin which is quite free from glands and hairs is most suitable for the purpose. 3. The frog's skin completely satisfies those conditions. 4. The method is simple, safe, easily used everywhere, cheap, and most effective. This method of grafting has, we believe, been tried with success by Mr. Stanley Boyd, of Charing Cross Hospital.—*British Medical Journal*, June 1, 1889.

The Effects of Splenectomy.—In the last congress of Italian surgeons, which was held in Bologna during May, 1889 (reported in the *Wiener klin. Wochenschrift*, May 23, 1889), the subject of extirpation of the spleen gave rise to most active discussion. DR. CECI, of Genoa, related a case of splenectomy, which was followed by swelling of the thyroid gland, fever, and emaciation, also complete hypertrophy of the tonsils. Later the general condition of the patient improved somewhat. The tonsils, on account of their condition, were excised. After this the thyroid swelling gradually disappeared.

DR. D'ANTONA, of Naples, reported a case of splenectomy which he performed in a child aged three. The patient had been suffering from a remitting fever of a severe and chronic type, and which no treatment seemed to alleviate. The spleen was greatly enlarged. After excision the wound healed by first intention, but the symptoms of fever did not abate. Later gastro-intestinal complications manifested themselves and the child died. Upon examination the spleen was found to contain large numbers of an as yet undescribed bacterium.

D'Antona does not consider the child's death due to the operation, and states that in similar cases he would certainly consider extirpation of the spleen indicated.

Hemostatic Collodion.—The following formula for hemostatic collodion, which is given by DR. PARESI, in the *Revue de Thèr. méd.-chir.*, May 15, 1889, will be found very valuable as an application for abrasions and superficial wounds:

℞.—Collodion	. . . . .	100 parts.
Phenic acid	. . . . .	10 "
Tannin } Benzoic acid }	. . .	āā 5 "

Apply with a camel's-hair brush.

Pilocarpine in Traumatic Tetanus.—DR. L. CASSATI, in the *Journal de Méd. de Paris*, May 26, 1889, reports three cases of traumatic tetanus which he has cured by heroic doses of pilocarpine given hypodermically. Since then he has experimented upon rabbits, inoculating them with the bacilli of tetanus and under the pilocarpine treatment only two out of nine died. The drug acts very quickly, all symptoms of tetanus disappearing in a few hours. Subsequent recovery is speedy and complete.

Creasote in Flatulency.—The antiseptic properties of creasote render it valuable in cases of flatulency and indigestion. DR. PEPPER, in the *Gazette hebd. de Méd. et de Chir.*, May 21, 1889, prescribes it in combination with alkaline salts, and gives the following emulsion:

℞.—Creasote	. . . . .	gtt. x.
Bicarbonate of soda	. . .	℥ij.
Pulverized gum	. . . .	q. s.
Water	. . . . .	f℥v.—M.

Dose, a tablespoonful an hour after meals. If the stomach is in an atonic condition and the gastric secretions are scanty, the following formula may be used to advantage:

℞.—Pepsin	. . . . .	℥j.
Creasote	. . . . .	gtt. x.
Sub-carbonate of bismuth	. .	℥j. —M.

Divide into thirty capsules. Dose, one, an hour after each meal.

Treatment of Angina Pectoris.—PROF. HUCHARD, in addressing the Hospital Medical Society of Paris, stated that, in his opinion, it was not the pain of angina pectoris that caused the profound distress of the patient, but rather the increased tension of the arteries. This, then, must be dealt with primarily. Preparations of iodine,

[1] Riforma medica, April 11, 1889.

used for a long period, nitrite of amyl, and nitroglycerine give good results.—*Deutsche med. Wochenschr.*, May 23, 1889.

Thiol as a Substitute for Ichthyol.—The Berlin correspondent of the London *Provincial Medical Journal*, in writing to the number of that journal appearing June 1, states that ichthyol has found a rival in thiol, a new product of chemical synthesis, obtained by artificially sulphuretting unsaturated hydrocarbons, and charging these with 10 per cent. of sulphur. Chemical and therapeutic researches prove its exact identity with ichthyol. Thiol consists of a brown fluid of the consistency of syrup; it is completely soluble in water, is totally inodorous, and has, therefore, a decided advantage over ichthyol. There exists also a dry thiol, which has two and a half times the strength of fluid thiol, otherwise having the same properties as the latter. Thiol is used like ichthyol in the following diseases: Acne, acute and chronic rheumatic arthritis, other rheumatic affections, contusions, decubitus, eczema, erysipelas, neuralgia, ischia, leprosy, frost-bites, prurigo, pruritus, ulcus cruris, burns, and scalds. On the initiative of Schweninger, thiol was tried at the Charité Clinic of Berlin, and Dr. Reeps reports on these trials in a very favorable light, as does also Dr. Buzzi, whose opinion is based on an even more extended clinical experience.

Dr. Reeps states that it may safely be concluded that thiol, externally applied in skin diseases, has positively the same effect as ichthyol. As their effect in these instances is identical, it may also be assumed that thiol will prove equally efficacious in other diseases where ichthyol has been employed. Reeps has taken internal doses up to two and a half grammes without discomfort or disturbance of the stomach; he believes, therefore, that it is comparatively harmless. It has been asserted lately that this is not the case with ichthyol, but he ascribes the adverse physiological effects of ichthyol to its obnoxious taste and odor, and these are entirely eliminated in thiol. He does not consider there is any further doubt that thiol and ichthyol are two exactly identical substances, and that thiol will serve to replace ichthyol when the natural sources of the latter remedy become exhausted; even now the discovery may be recognized as a great boon, which makes us independent of nature's supply of this valuable remedy. The following are the usually prescribed formulæ:

℞.—Thiol . . . . . ʒj.
Vaselin . . . . . ʒj.
Lanolin . . . . . ℥j.—M.

Make into ointment. S. For external use.

℞.—Thiol sicc. . . . . gr. ij.
Pulv. glycyrrhizæ . . . . gr. ij.
Glycerin tragacanth . . . . q. s.—M.

For one pill. S. One pill to be taken three times a day.

℞.—Thiol sicc. . . . . ʒj.
Zinc. oxid. . . . . ʒij.
Amylum . . . . . ʒj.
Talc . . . . . ℥ij.—M.

For powder. S. The affected parts to be dusted with this powder.

Salol as a Dressing.—At the last meeting of the Hunterian Society of England, reported in the *Provincial Med. Journ.* of June 1, MR. CORNER exhibited several cases illustrative of the antiseptic power of salol (salicylate of phenol) as a dressing for wounds after the pads had been rendered aseptic by a 1:20 solution of carbolic acid. Salol has a pleasant odor, and could be used freely without fear of poisoning or irritating, and when dry formed a hard but friable surface. A case was shown where the wound was dressed with salol and left untouched for a month, and remained sweet.

Wiring the Phalanges.—PROF. LEWIS, of the Wabash Hospital, reports in the *Kansas City Medical Index* for May, a case of ununited fracture of the first phalanges of the first and second fingers. After all other modes of treatment had failed, the fragments were wired together. The result was speedy and perfect union.

Treatment for Baldness.—DR. E. BESNIER says that the falling out of the hair may be checked, and a new growth started by the following treatment. The hair should be cut short and a mild sinapism or rubefacient applied to the scalp; then every five days the following lotion is to be applied:

℞.—Acetic acid } . . . āā q. s.—M.
Chloroform }

The above should be used cautiously, as it is an irritant, but stimulates the hair powerfully. In connection with the above, the following pomade should be used:

℞.—Salicylic acid . . . . gr. xv.
Precipitate of sulphur . . . ʒjss.
Vaseline . . . . . ʒv.—M.

This pomade should be applied fresh every morning, the scalp previously having been well washed. Fatty substances retard the growth of the hair, and should not be used.—*Journal de Méd. de Paris*, May 12, 1889.

Ephedrin and Pseudo-ephedrin.—At the Medical Congress of Bologna, DR. WREISE reported the results of a series of experiments with the two alkaloids of the Ephedra vulgaris, ephedrin and pseudo-ephedrin. The first investigations with this drug were made by Dr. K. Miura, of Tōkyō, Japan. Wreise's results show that the action of ephedrin is rather uncertain; that, however, of pseudo-ephedrin is more constant. The latter acts as a strong mydriatic; a few drops of a ten per cent. solution will produce enlargement of the pupil lasting seven to eight hours. The action of the drug takes place in about half an hour after it has been dropped into the eye. Neither accommodation, refraction, nor sensibility of the conjunctiva or cornea were in any wise influenced by the drug.—*Wiener klin. Wochenschrift*, May 30, 1889.

The Influence of Parenchymatous Injections into the Spleen.—Questions concerning various affections of the spleen, as well as operations upon it, seem to have taken an important part in the Italian Congress of Surgeons held at Bologna, as reported in the *Wiener klin. Wochenschrift*, May 30, 1889. DR. BEORCHIA NIGRIS read a paper on the influence of parenchymatous injection upon enlargements or tumors of the spleen. There was an extensive discussion regarding the relative value of different fluids for injection. Nigris said that he had tried water, Fowler's

solution, weak solutions of quinine and strychnine, etc., and had found that equally good results were obtained by injections of water as by any other substance. In all cases he observed the formation of connective tissue at the seat of the injection. This tissue in contracting or shrinking caused a decided decrease in the size of the spleen. Nigris is of the opinion that this phlogistic process is entirely independent of the nature of the fluid injected.

A Saline and Chalybeate Tonic.—DR. AUSTIN FLINT, in writing to the *New York Medical Journal*, states that after long and careful investigations, he has found the formula given below to be a most efficient chalybeate. Its action is most marked in cases of anæmia, loss of appetite, etc.:

℞.—Chloride of sodium	. . .	ʒiij.
Chloride of potash	. . .	grs. ix.
Sulphate of potash	. . .	grs. vj.
Carbonate of potash (Squibb)	.	grs. iij.
Carbonate of soda	. . .	grs. xxxvj.
Carbonate of magnesia	. . .	grs. iij.
Precipitated phosphate of calcium		ʒss.
Carbonate of calcium	. . .	grs. iij.
Ferri redacti (Merk)	. . .	grs. xxvij.
Carbonate of iron	. . .	grs. iij.—M.

In capsules, No. 60.

Sig.—Two capsules three times a day, after eating.

This formula is put up in the form of compressed tablets by Frazer & Co., of New York, also as tablets made by Caswell, Massey, & Co., 1121 Broadway, and as sugar-coated tablets, made by Wanier & Imgard, 1322 Broadway, New York.

Dr. Flint gives the preference to the sugar-coated tablets, as the others sometimes produce slight nausea.

Iodides in Cardiac Affections.—DR. MASCAREL, in an article in the *Revue gênèr. de Clin. et de Thèr.*, May 30, 1889, says that he has found six to seven-drachm doses of iodide of sodium and iodide of potassium, given twice daily, exert a most beneficial action in cases of valvular endocarditis, especially when of a rheumatic nature. In conjunction with this treatment a strict milk diet should be enforced.

Phenol in Whooping-cough.—DR. ROTHE, in the *Revue gênèr. de Clin. et de Thèr.*, May 30, 1889, says that he has found phenol, in the following formula, most efficient in whooping-cough. Under this treatment the disease seldom lasts two weeks:

℞.—Phenic acid } Alcohol }	. . .	āā grs. xxxj.
Tincture of iodine	. . .	gtt. xx.
Tincture of belladonna	. .	fʒj.
Peppermint water	. . .	fʒiijss.
Syrup of opium	. . .	fʒss.—M.

A half teaspoonful should be taken every two hours until the symptoms decrease in severity.

Antipyrin in Labor.—PROFESSOR PINZANI, of Bologna, says the *Wiener klin. Wochenschrift*, May 30, 1889, has found, by numerous experiments, that antipyrin considerably lessens the severity of labor, while it does not retard its natural course. When given hypodermically its action is manifested in about two hours, but if given by the mouth no relief or ease of pain is noticed until after four or five hours.

Dyspeptic Insomnia.—The following prescription, given by DR. THONIN, in the *Revue de Thèr. méd.-chir.*, May 15, 1889, is claimed by him to be most effectual in relieving the sleeplessness which so frequently accompanies certain forms of dyspepsia:

℞.—Syrup of coca	. . . . .	ʒijss.
Hydrate of chloral	. . . .	ʒij.
Bromide of soda	. . . .	ʒj.
Tincture of chloroform	. . .	gtt. xx.

Three doses, of a dessertspoonful each, should be given one hour apart from each other. No gastric irritation has been observed to follow its use.

Treatment of Granular Lids.—In writing to the *Kansas City Medical Index* for May, 1889, DR. F. M. SCOTT states that he has found the following method of treatment of granular lids most efficacious even in most severe and obstinate cases accompanied with pannus. The lids are painted with a weak solution of nitrate of silver (five grains to the ounce of water) four times a week, and immediately after washed out with a weak solution of salt and water. Five drops of the following should be applied daily by the patient:

℞.—Boracic acid	. . . . .	grs. xv.
Tannic acid	. . . . .	grs. x.
Glycerine	. . . . .	ʒjss.
Rose water, q. s. to make	. .	ʒj. —M.

The Alkaloids Used in Eye Diseases.—The alkaloids most commonly used in ophthalmology, such as atropine, duboisine, hyoscine, eserine, etc., are usually applied in the form of sulphates. DR. GALEZOWSKI, in *L'Union Médicale* of June 8, 1889, maintains that these salts contain an excess of acid, and when used in the form of lotions or ointments quickly undergo decomposition, the acid being liberated. Their use in this form is, of course, very irritating to the eye. Galezowski therefore suggests that the sulphuric acid be replaced by boric acid and borates be employed instead of sulphates. The borates are far more stable and less irritating. Borate of atropine acts somewhat slower than sulphate of atropine, but it is far less irritating, less painful, and its action longer. Borate of cocaine is not so rapid an anæsthetic as the other salts commonly used, but it is equally as effective.

Chromic Acid for Perspiring Feet.—The Medical Department of the Prussian War Office reported last year the results of a series of experiments regarding the value of chromic acid in sweating feet. The drug was used in over eighteen thousand cases, all of which were reported.

It is best used in a five per cent. solution, and should be applied with a camel's-hair brush, the feet having been previously thoroughly washed and dried. The acid seems to harden and strengthen the skin; the moist and reddened portions become dry and smooth-looking, and the fetid sweat quickly disappears. In many cases three or four applications effected a permanent cure. Increased endurance for marching was immediately observable.

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SATURDAY, JULY 6, 1889.

THE TREATMENT OF UTERINE TUMORS BY ELECTRICITY.

IT is but a few weeks since prominent neurologists of New York, in a discussion at the Academy of Medicine upon the application of electricity to the nervous system, expressed decided scepticism as to its lasting benefit for many of the conditions for which it is now used, and even showed an eagerness to banish one form of it—Franklinism—to a limbo whence it could not be recalled. These reactionary views did not proceed from inexperienced nor unthinking men, nor are we willing to believe that they signified that electricity as a therapeutic resource is to be relegated to the quacks. Such is the status, however, in the evolution of electricity as a therapeutic agent for nervous diseases.

A somewhat similar scepticism prevails in regard to uterine electro-therapeutics, in no department of which have more substantial results been obtained than in connection with myomata or fibro-myomata or fibroids, as they are commonly called; at least such is the assertion of the advocates of this method of treatment. Attempts at treatment with this agent were made long ago, and it will not do to ignore or belittle the efforts which were made by Kimball and Cutter, and Freeman, imperfect as they may have been in the light of the present attainments; nor the efforts of Sir James Simpson, which were still more imperfect, according to the testimony of Thomas Keith, who participated in them, and which accomplished no benefit, but rather did harm. It has remained for Apostoli to systematize and perfect a method of treatment for uterine fibroids which, in *skilful hands*, can be fairly called comparatively safe, comparatively painless, and efficient. This is the testimony of four such witnesses as Sir Spencer Wells, the Keiths—father and son, and Playfair.

The proposition, and we may say the doctrine, of Apostoli may be formulated in the following terms: Given an uterine fibroid tumor, large or small, with its accompanying inconveniences and perils—which include discomfort, pain, bleeding, weakness, and inability to attend to the customary duties of life—these may all be relieved, and the tumor may be reduced more or less in size, by the use of the galvanic current, with an intensity varying from 100 to 350 milliampères, from five to twenty minutes two or three times a week for a period of two or three months or more. Extraordinary precautions are required as to thorough cleanliness of all electrodes used, and the antiseptic principle is applied to the treatment as far as possible. The galvanic current may be introduced into the tumor through sharp-pointed electrodes which puncture the tumor, or one electrode may be introduced into the uterus or vagina, and the other laid upon the abdomen, the latter being very large, imbedded in wet clay, and adapted to high intensities and considerable diffusion. The other details as to electrodes of particular kinds, and other necessary instruments, need not concern us now.

The credibility of Apostoli's assertions is vouched for by witnesses of the highest respectability, including those whose names have been given. Furthermore, the gentlemen mentioned are entirely competent as surgeons and gynecologists to express an opinion. They have all been to Paris, have seen Apostoli's work, have learned his methods, and have made practical application of them themselves. What is still more remarkable, to one of them the world is more indebted than to any other man for developing abdominal surgery when its advocates were few and timid, and he has practised it with distinguished success for a considerable portion of a long life; while another of the same group has taught the world the possibilities of abdominal surgery by mortality statistics which are susceptible of little if any improvement. Keith—the successful surgeon, the man whose record in hysterectomy stands unrivalled—pleads for a cessation of hysterectomy for fibroid tumors until electricity has had a

thorough trial. This seems like a fair proposition, and in the face of such facts as the necessarily high mortality by the knife, even at the hands of the most skilful surgeons, it is incumbent upon gynecologists to make a fair, searching, and unprejudiced investigation into the merits of the case.

On this side of the Atlantic, opinion as to the value of this treatment has varied about as it has in England. It has its pronounced advocates who have done good work. Among them may be mentioned Lapthorn Smith of Montreal, Martin of Chicago, Engelmann of St. Louis, and others. Engelmann has even laid the subject, with clearness and enthusiasm, before the assembled gynecologists of Berlin, and this is the best way to lay an enemy's country under tribute. Acrimonious dispute has also not been wanting.

It is idle to expect that accident will never follow this treatment. He is foolish who would assert it, and he is more foolish who would believe it. We entirely disagree with those who think that electricity may be used in gynecology without much knowledge of its physics, at least safely and efficiently. If the best results are to be obtained, an understanding of the means to be used is as indispensable as in any other case in which the best results are sought.

Concerning the way in which the galvanic current acts in fibroid tumors, which has excited so much discussion, profitless as it seems to us, the most that can be said is that it causes impairment of nutrition. The results demonstrate that fact clearly enough, and all the speculations in regard to polar action, electrolysis, diffusion of current, etc., do not change or affect it.

A practical drawback to this method of treatment is the expense of the necessary apparatus. This will deter many from making the requisite trial of it, but it is to be hoped that it will not weigh with those who are constantly being called upon to treat fibroid tumors. What is now needed for the formation of a correct conclusion of the value of electricity in the treatment of uterine fibroids, is the record of experience of a number of careful observers.

THE TEACHERS OF HYGIENE IN EUROPEAN UNIVERSITIES.

THE University of Kiel has inaugurated a professorship of Hygiene, and Dr. Bernard Fischer has been appointed to the chair. There now remain only two Prussian Universities—those of Bonn and Königsburg—without such chairs. Dr. Fischer was one of Professor Robert Koch's pupils and accompanied him on that memorable journey into Egypt and India which resulted in the discovery by Koch of the bacillus of Asiatic cholera. Another companion on that voyage was Dr. Gaffky, now Professor of Hygiene at Giessen. Other pupils of Koch occupy the same department of instruction in other universities, as Dr. Gärtner in Jena, Dr. Löffler in Greifswald, Dr. Hüppe in Wiesbaden, Dr. Becker in Leipsic, Dr. Fränkel in Berlin, and Dr. Frank in Naples. These are all members of the younger generation of instructors and are adepts in the laboratory methods of Koch. Dr. Fischer's original work has been exerted in two directions chiefly, one in the application of bromine to disinfection, another in the study of the phosphorescence of the sea.

DR. HENRY C. COE has been appointed Professor of Gynecology at the New York Polyclinic, to fill the vacancy occasioned by the death of Dr. James B. Hunter.

A CONSIDERALE space has been given by the public press to the newly proposed plan of disposal of corpses by desiccation or mummification. The promoters of the plan claim, with no little show of reason, that it has all the advantages that pertain to cremation, and has one manifest advantage over the latter in that the possibility of the proof of crime is not destroyed by the combustion of the body. The theory of the process implies that the gases only—given off by decomposition—shall undergo combustion, currents of dry air being in constant motion over the bodies placed under this method, sometimes called the "new mausoleum plan."

WE are informed that a French translation of Dr. Senn's work on *Surgical Bacteriology* will be issued shortly by a Paris publishing house.

WE learn from a German contemporary, that Dr. W. Roeventhal, who has recently been studying the influence of salol upon the cholera bacilli, in the Cornil laboratory in Paris, has received a special commission from the French Government to go to Tonkin to continue his experiments on the human subject—that is, to test the drug in the disease itself. High rank in the French Marine Service has been conferred upon him, and he has been made entirely independent in his actions. The expenses of his researches will be borne by the French Government.

This is the first case of a physician, who is still a German citizen, receiving an appointment of this kind.

ACCORDING to the *London Medical Recorder* of May 20, 1889, no fewer than 1168 human beings were destroyed by snakes in the Bombay Presidency during 1887, and over 300,000 venomous snakes were destroyed.

SOCIETY PROCEEDINGS.

AMERICAN MEDICAL ASSOCIATION.

Fortieth Annual Meeting, held at Newport, R. I., June 25, 26, 27, and 28, 1889.

(Specially reported for THE MEDICAL NEWS.)

GENERAL SESSION.

FRIDAY, JUNE 28TH.—FOURTH DAY.

The Association was called to order by the President, at 10 A.M., and opened with prayer.

DR. W. H. WELCH, of Baltimore, then delivered the

ADDRESS IN STATE MEDICINE,

which will be published in full in a later issue of THE MEDICAL NEWS.

MISCELLANEOUS BUSINESS.

The Section on State Medicine reported that the Committee on Infanticide had made no report, and asked that the Committee be dismissed in accordance with the By-laws.

DR. N. S. DAVIS moved that a committee be appointed to secure excursion rates over the most feasible routes to the International Medical Congress, in Berlin. The motion was carried.

Drs. Pancoast, Surgeon-General Hamilton, A. Nelson Bell, and N. S. Davis were so appointed.

The following were announced as

DELEGATES TO FOREIGN MEDICAL ASSOCIATIONS:

I. N. Quimby, J. W. Jackson, F. J. Lutz, S. E. Solly, J. F. Noyes, J. M. French, A. J. Fuller, E. Cutter, J. H. Knight, I. N. Love, J. M. Matthews, W. C. Wile, W. F. Hutchinson, A. N. Owen.

Delegate to the Canada Medical Association, Dr. P. S. Conner.

THE JOHNSTOWN CALAMITY.

SURGEON-GENERAL HAMILTON offered a resolution expressing sympathy with the unfortunate members of the community of Johnstown, Pennsylvania, and especially with the members of the profession. Also that the Treasurer of the Association be authorized to remit the annual dues of any member residing there.

The Secretary then read the following list of

OFFICERS OF SECTIONS

for the ensuing year.

SECTION OF MEDICINE.—*Chairman*, J. H. Musser, M.D.; *Secretary*, H. McColl, M.D.

SECTION OF SURGERY.—*Chairman*, B. A. Watson, M.D.; *Secretary*, J. B. Deaver, M.D.

SECTION OF OBSTETRICS.—*Chairman*, W. W. Potter, M.D.; *Secretary*, J. E. Hoffman, M.D.

SECTION OF STATE MEDICINE.—*Chairman*, J. B. Hamilton, M.D.; *Secretary*, F. S. Bascom, M.D.

SECTION OF OPHTHALMOLOGY. — *Chairman*, S. C. Ayres, M.D.; *Secretary*, E. J. Gardner, M.D.

SECTION OF DISEASES OF CHILDREN.—*Chairman*, I. N. Love, M.D.; *Secretary*, Dr. Bush.

SECTION OF DERMATOLOGY AND SYPHILOGRAPHY.—*Chairman*, I. E. Atkinson, M.D.; *Secretary*, W. T. Corlett, M.D.

MISCELLANEOUS BUSINESS.

The Secretary, Dr. Atkinson, moved that he be authorized to refer the reports of the Secretaries of Sections, which he had received, to the Committee on Publication. The motion was carried.

The President, Dr. Dawson, through the Secretary, moved that a vote of thanks be extended to the Chairman of the Committee of Arrangements, Dr. Storer; to the Governor of Rhode Island; to the people of Newport, and to the large number of individuals who had materially contributed to the entertainment of the members of the Association during their stay in the city.

Dr. Pancoast, of Philadelphia, responded to the remarks of Sir James Grant at the Thursday session. In conclusion he moved that a vote of thanks be extended to that distinguished gentleman for his presence and good wishes, and that it is the desire of the Association that he may soon again be present at its meeting.

Sir James Grant then expressed his gratitude as well as that of the profession of Canada for the cordial welcome which he had received at the hands of the Association, and for the handsome manner in which he had been entertained during this most interesting meeting of the American Medical Association.

The Association then adjourned.

SECTION OF OBSTETRICS AND GYNECOLOGY.

WEDNESDAY, JUNE 26TH.

(Concluded from page 731.)

DR. A. VANDER VEER, of Albany, N.Y., read a paper on

CONCEALED PREGNANCY: ITS RELATIONS TO ABDOMINAL SURGERY,

based upon a study of seventy cases of abdominal section in which pregnancy existed as a complication which had not been diagnosticated. It was observed that the most eminent operators, as well as those of few opportunities, had made the same error relative to pregnancy. A diligent effort had been made to obtain the histories of reported cases, and the library of the Surgeon-General's Office had been thoroughly searched, in addition to three hundred circular letters which had been sent to surgeons in this country and in Europe.

The results of these researches were tabulated in the author's paper, and though incomplete they contained all accessible literature. Abstracts of ten cases were given, including two which came under the author's personal observation. There were twenty-six cases in which pregnancy was complicated with fibroid tumors,

and no diagnosis had been made. The indications for operation had depended upon a rapidly growing abdominal tumor of obscure character, and great distress on the part of the patient. In the majority of the cases there had been no symptoms of pregnancy. Rapid growth and changes in the consistency of the tumor had been observed in nearly all the cases, yet pregnancy had, in many of them, been unsuspected. Rapid growth *per se* might be fallacious as an evidence of pregnancy, for it might depend upon malignancy or other conditions. Amenorrhœa had been observed in eleven cases, and mammary changes in four. In the earlier months of pregnancy there might be even excessive flowing, such a cause frequently resulting in abortion in cases of fibro-myxoma.

The physical signs of pregnancy, prior to the fourth month, might be obscured or concealed by the presence of fibro-myxoma. The uterine sound had been used in nearly all cases and only served to confirm the erroneous diagnosis. Again, pregnancy might be extra-uterine or in a rudimentary horn of a bi-cornuate uterus. The author did not intend to affirm that the diagnosis of pregnancy prior to the fourth month, as a complication of fibro-myxoma was impossible in all cases, but did believe that the diagnosis was, at best, a matter of presumption, and that it was often impossible when immediate operative interference was demanded. In only three of the reported cases did error occur after the fifth month.

Nine abdominal sections had been classified in which the incision revealed a pregnant uterus alone. Five cases occurred early in the history of abdominal surgery when methods of differential diagnosis were not as well taught and practised as now. Hydramnion as a complication of pregnancy led to abdominal section in two cases. The cases of Doctors Prince and Varian illustrated the utter unreliability of the statements of unmarried women with abdominal enlargement, whatever their reputation for chastity might be. Pregnancy as a complication of ovarian cyst had been frequently met with, and had not always been diagnosticated. In twenty-eight of the collated cases there had been no symptoms, except that in one there had been amenorrhœa. Should there be the slightest suspicion of pregnancy the use of the uterine sound is positively contraindicated, as abundant experience had shown that we had no right to induce abortion before performing ovariotomy.

From the facts which had been obtained the following conclusions were justifiable:

1. From the study of these sixty-eight cases the author was convinced that errors of diagnosis frequently depend upon conditions which make it absolutely impossible to avoid the same diagnostic conclusions should the same conditions recur in other cases.

2. It would seem to be the duty of every operator before making an abdominal incision, to secure by his own efforts or by those of a sufficiently qualified operator, a fully classified written statement of the facts which make up the clinical history of the case, together with the results of the physical exploration made by the operator and his consultants, a formal blank statement being used so that no facts may be omitted. No part of this duty should be delegated to *internes* of hospitals, except under proper supervision.

3. The probable diagnosis should be based upon the physical signs expressed in the notes, corroborated, with few exceptions, as in the case of unmarried and ignorant patients, by the rational signs contained in the clinical history, and not by simple abdominal palpation and "the dim" light of a pelvic examination.

4. Should the slightest probability of pregnancy exist it should be clearly stated to the patient and to her friends.

5. The necessity for operative measures and the consequences of delay or neglect should be carefully stated to the individuals concerned, before obtaining their formal consent to an operation.

6. Every operator should report all such cases *in full*, that the methods of diagnosis may be improved if possible.

7. The profession at large should maintain that pregnancy *may be* absolutely concealed, especially prior to the fourth or fifth month, by other intra-abdominal conditions.

THURSDAY, JUNE 27TH.

The papers of the previous session being, with one exception, concerned with the

PATHOLOGY, OR SURGERY OF THE ABDOMEN,

or its contents, were discussed together. The discussion was participated in by Drs. Polk, Price, Baldy, Hoffman, Parish, Dudley, Gordon, and several others. The following is a brief *résumé* of this discussion:

Dr. Johnson had done well in calling attention to the possibility of infection by the bacillus of tetanus after ovariotomy, and operators should not forget that their horses or their stables might be media for this variety of infection. The short list of cases cited by Dr. Johnson was increased by cases mentioned by Dr. Gilman Kimball and Dr. Parvin, all of which would be incorporated in Dr. Johnson's paper.

Concerning accidents to the bladder in connection with laparotomy, it was thought singular by Dr. Price that the mortality should have been great. In general, while there was the possibility of accident even to the most careful operator, as Dr. Jackson had affirmed, it would seem as if the method which is adopted by many operators, of carefully lifting a small portion of the peritoneum or what is believed to be the peritoneum upon a tenaculum or forceps, and isolating it from the underlying structures of whatever character, would be sufficient to enable one to avoid wounding either the bladder, the intestines, or any other structure which one does not intend to penetrate.

No objection was raised to Dr. Parish's classification of pelvic abscess, and it was generally believed that it placed the profession upon the position which was established many years ago by Bernutz and Goupil. Other theories of pelvic abscess, notably those of Emmet and Thomas, were now believed to be untenable, and while some operators might err in regarding the large proportion of these abscesses as due to tubal or ovarian disease, it was certainly true that such disease was the causative factor in very many cases. Areolar abscess, also, was not limited in its etiology to conditions associated with pregnancy, but, as the author of the paper had said, might originate from traumatism or infection.

As to the treatment, the greater number of the disputants believed in laparotomy in most cases, if the abscess were located within the abdominal cavity.

The discussion of Dr. Vander Veer's paper on

CONCEALED PREGNANCY

elicited the narration of a large number of cases in which errors of diagnosis had been made, and showed that even with the greatest care in obtaining histories and in making examinations such errors would occur. It was believed that it did not necessarily reflect unfavorably upon a gynecologist, in the eyes of his colleagues, though it might in the eyes of the friends of the patients, if, after suitable precautions had been taken, a mistake should sometimes be made.

DR. S. C. GORDON, of Portland, Me., reported a

CASE OF EXTRA-UTERINE PREGNANCY,

in which a successful operation had been performed after the rupture of the tubal sac. This was the speaker's second successful case, his first having been operated upon in 1886. The latter was the third successful operation for this condition which had been performed in this country. The history of the case, in brief, was that the patient missed her menstrual periods between the months of February and June, 1888. In the latter month she had two severe attacks of pain and prostration, in which rupture of the sac occurred. She rallied from both of them, and continued in a fair state of health until November, having menstruated the two previous months and also having a profuse leucorrhœal discharge. When seen, in November, by the speaker, she had a small tumor to the right of the uterus, and the condition was diagnosticated as a tubal pregnancy with associated peritonitis, or a condition which resulted from that.

The operation was performed in January, 1889, and the diagnosis was verified, a three and a half months' fœtus being found. The fluid of the fœtal sac had been absorbed, and lying at the bottom of the sac was found a small and very hard blood-clot. The patient had entirely recovered within five weeks after the operation.

The point which the speaker made was that as soon as a diagnosis of tubal pregnancy had been made an abdominal operation should be performed, as the condition was a constant menace to the patient's life. He was not in favor of using electricity in any form for this condition as he believed it was not a radical measure, and if the fœtus were killed the products of conception would still remain, which not improbably might cause a condition which would necessitate laparotomy. It was better to perform laparotomy before this condition occurred.

DR. W. H. TAYLOR, of Cincinnati, reported a case of

EXTRA-UTERINE PREGNANCY TREATED BY GALVANISM,

in which there were some evidences that rupture had occurred, and it was believed that the diagnosis of tubal pregnancy was clear and distinct. The galvanic current was used with an intensity of one hundred and twenty-five milliampères for a suitable number of times, and the subsequent history was that of complete recovery and well-being of the patient, and gradual diminution in the size of the tumor. It was considered that the electrical treatment had produced a cure in this case.

This paper and that of Dr. Gordon were discussed together.

Dr. JOSEPH PRICE, of Philadelphia, believed that the opinion advanced by Dr. Gordon was correct, namely that tubal pregnancy should be treated by abdominal section as soon as recognized. He did not believe that temporizing with electricity or any other agent was warrantable. Electricians admitted the propriety of laparotomy after rupture had occurred when the conditions had become complicated and the patient's chances of recovery had diminished. Why should they not admit that the same operation should be performed before the unfavorable complications had arisen?

DR. BALDY, of Philadelphia, believed that laparotomy should be done when a diagnosis of tubal pregnancy had been made, and further that it should be done if the diagnosis were not clear and there were only suspicions pointing to ectopic gestation. He failed to be convinced by the statistics of those who had reported series of cases of this character which had been cured by electricity. What had become of the products of conception in such cases? If tubal pregnancy had existed and the fœtus were killed by electricity it would produce the same condition for which laparotomy was now so frequently done, viz., pelvic abscess in some form, hence it was unjustifiable.

DR. E. W. CUSHING, of Boston, approved of the sentiment expressed in Dr. Gordon's paper. He was undecided as to the proper course to pursue in cases in which rupture had taken place, the patient had rallied, but a hematoma appeared to have resulted. It was questionable whether in the uncertainty of such cases laparotomy should always be performed.

DR. A. F. CURRIER, of New York, objected to the implication that men who had had large experience in tubal pregnancy, like Thomas, for example, were unable to make suitable diagnoses. The published statistics of such men certainly did speak in favor of the electrical treatment of tubal pregnancy, especially in view of the success which they believed they had attained by such treatment. It was by no means certain that abscess would follow the death of a fœtus by electricity, as had been implied, and it was not improbable that in many cases the absorption of the products of conception did occur when the fœtus was destroyed prior to the third month, as Thomas had advised. The experiments of Leopold, quoted by Thomas, were in point in this connection, and he believed that all such statements were entitled to a fair and judicial hearing.

Personally, however, the speaker was entirely in accord with Dr. Gordon, and had placed himself on record in the report of a case, published two or three years ago, favoring immediate operation as soon as a diagnosis of ectopic gestation could be made. This might lead to occasional errors, and had done so in three recent cases of which the speaker had knowledge, and this proved the importance and timeliness of the paper on concealed pregnancy which had been read by Dr. Vander Veer.

The speaker was also glad to indorse the plan of immediate operation which had been first advocated by Prof. White, of Buffalo, in behalf of his friend, Dr. Janvrin, of New York, who had earnestly advised this method, and had published an important case in which the inability of electricity to avert a fatal result was painfully apparent.

DR. A. B. CARPENTER, of Cleveland, O., then read a paper on

ALEXANDER'S OPERATION, WITH A NEW METHOD OF SECURING THE ROUND LIGAMENTS.

The question as to the utility of this operation seemed to be settled, but the speaker believed that its greatest utility was in cases of prolapsus. When the operation is done for retroversion he believed that great difficulty might exist in finding the ends of the ligaments, these structures having undergone much traction and consequent thinning. In prolapse he believed the case was otherwise, that the structures involved in the prolapse underwent hypertrophy, and among them the round ligaments. They were, consequently, much easier to find than in cases of backward displacement.

The ligaments having been found, the author's method consisted, after having drawn them out to a sufficient extent and raised the uterus to its normal position, in passing a single silver wire suture through the ligament and the pillars of the ring, as a sort of anchorage suture. The excess of ligament which had been drawn out was then cut off near the ring, and the stump sutured with catgut to the contiguous structures. A drainage-tube was then introduced and the wound closed. Both sides having been thus treated, posterior colporrhaphy should be performed and a Hodge pessary introduced, to be worn by the patient until all the structures are firm under their new conditions. The wire suture which was introduced was intended to be retained permanently.

DR. A. F. CURRIER, of New York, criticised the author's plan of using a permanent silver wire suture by expressing fear that it might, sooner or later, be a source of irritation, perhaps of abscess. Certainly this would be so unless the wire were entirely aseptic, and, in order to be certain as to that point, one must prepare it himself. Wounds made in Alexander's operation seemed to be very prone to suppuration, and, even with very careful operating, the presence of so much fat and cellular tissue was an inviting field for a septic process. He differed with the reader of the paper in believing that the round ligaments could readily be found in prolapse. Of course, experience resulted in skill, and those who, like Kellogg, of Battle Creek, had done the operation many times, were familiar with all the complications and uncertainties which might arise in searching for the ends of the ligaments.

The speaker concurred with the reader of the paper as to the utility of the operation in many cases of prolapsus and backward displacement, and also believed in the simultaneous operation of colporrhaphy and the subsequent use of a pessary.

DR. ELIZA J. C. MINARD, of Brooklyn, presented some clinical statistics in favor of

FREE DISPENSARY AND HOSPITAL WORK.

Aside from the great value of our numerous dispensaries and hospitals as means of charity, we should never lose sight of their value as means of education. Those who were most skilful in surgical and medical work had almost invariably passed years of apprenticeship in dispensaries and hospitals. It might be considered that such long experience in what might to some seem drudgery was the price of skill. In this respect, also, would be apparent the value of the various post-graduate schools which furnished opportunities denied to the average practitioner, especially in early professional life. A word was also spoken in defence of those who performed the so-called mutilating operations upon women. It seemed strange that any defence should be required for the removal of organs which were usually so diseased that their function was abolished, and which, while they remained in the body, were a constant source of pain and distress. The results which have usually followed such operations should speak with sufficient clearness as to their value and the relief which they are wont to bring.

DR. JOSEPH HOFFMAN, of Philadelphia, read a paper on

CRANIOTOMY AND ITS INDICATIONS.

There could be no doubt that there were conditions in which craniotomy was an operation which should be performed. It was extremely desirable to know what place it should occupy in view of its merits or its faults. If the long list of indications which some writers have given is to be taken seriously, then Tyler Smith's plea for the abolition of the operation is worthy of consideration. These alleged indications certainly showed to what an extent the operation had been abused. The object of craniotomy must be considered to be the saving of the mother's life, especially in cases in which the fœtus is already dead.

The general indications for the operation should be fœtal deformity, including hydrocephalus, monstrosity, or any serious deformity which can be appreciated as an obstruction to labor, and pelvic deformity of varying degrees, not including those cases in which the conjugate diameter was two inches or less. As to the morality or immorality of the operation, in the abstract, the accoucheur could not deal with that question. The purpose of the operation was conservative—to save the mother's life by sacrificing the child's, if necessary, one life being lost instead of two.

For those cases in which the conjugate diameter was two inches or less, the Cæsarean section had long ago been advocated by Hodge and others, when that operation offered far fewer chances of success than it now does, the direction being given then as now that it be performed early. The speaker could not agree with those who advocated early hysterectomy, as did Tait, or Cæsarean section, on the ground that they were simple operations. For any operation of this character skill was required. As an argument in favor of craniotomy it must also be admitted that many infants which are born after protracted labors, perhaps after instrumental delivery, are born dead, and that many others, even if born alive, have been so injured in the process of parturition that they survive but a few hours or days.

DR. LOVEJOY, of Haverhill, Mass., was in full accord with the reader of the paper. In an experience of more than three thousand labors during forty years among people who were largely of Irish nativity, he had found it necessary to perform craniotomy on a number of occasions. He believed it to be not more difficult than forceps operations, and not so dangerous as version. The indications with him had been contracted pelvis, prolonged labor, etc. In none of his cases had there been a maternal death.

DR. A. F. CURRIER, of New York, objected to the idea that craniotomy could be considered in any sense a

simple operation. There was not merely the destruction of the child and its extraction to be considered, but there were the soft parts of the mother as well. He had seen serious injuries to these at the hands of one of the most skilful operators in the Vienna Maternity Hospital. In his own experience he had found the operation extremely difficult, and it was one of the operations which one did not care to do very often.

DR. WILLIAM H. PARISH, of Philadelphia, had never done the operation upon a living child. It was warrantable to perform it if the child were dead and the mother's powers were failing. With the advantages and the comparative safety of the Cæsarean section at the present time craniotomy should be less frequently performed. The operation was a cruel one, and, as usually performed, unjustifiable. It was not enough that the father and mother consented to the destruction of the child. They had no right to give away the child's life, and the child had rights which should be respected. As a rule, he would say that craniotomy upon a living child was not justifiable.

DR. HENRY D. FRY, of Washington, D. C., agreed with the previous speaker that the operation should be done as infrequently as possible, and was also of the opinion that it was done when it should not be.

DR. WILLIAM H. WATHEN, of Louisville, spoke with great earnestness and feeling respecting those who found occasion to do this operation frequently. So abundant are the resources of modern obstetrics, so great the success of careful and conservative obstetricians, that it should not be allowable for the opinion to go forth that the Section regarded with any favor the frequent performance of this destructive operation. He quite agreed with a previous speaker that it should not be done upon a living child.

DR. E. F. WALKER, of Providence, R. I., reported a case of a

DOUBLE-HEADED MONSTER.

This most rare and beautiful specimen of ischiopagus was exhibited in an excellent state of preservation. The author had been able to obtain but a meagre history of the labor in which the specimen was born. The mother was attended by an ignorant Irish midwife, and the details which she had given were unsatisfactory. The midwife would not reveal the name of the mother, so that she could not be interviewed. The mother was a married Irishwoman, thirty years of age and a primipara. Her labor began in the afternoon of July 15, 1888; the midwife ruptured the sac at 1 A. M. the following morning, and the pains continued with additional severity until 5 A. M., when the entire fœtal mass came away, the placenta following after an interval of five minutes. There was little hemorrhage and the midwife was unable to say whether there had been much injury to the soft parts. The patient recovered rapidly, was doing her work again within a week, and was now pregnant again. The monster lived twenty-six hours, cried at birth, and took milk freely by both mouths. Its weight was about fifteen pounds. There was one placenta, one cord, no history of fright, injury, or anything else that was unusual during pregnancy, as far as could be ascertained.

The mass was crescentic in shape, its longest surface following the line of the abdomen, and measuring twenty-one inches from vertex to vertex. It consisted of two bodies joined together at the buttocks, with a head at each end. The larger body has a trunk, two arms, two legs, and is well developed. The smaller one has the right arm and leg well developed, the left forearm and hand are deformed, the left foot and leg are also deformed. The left hand has but three fingers, which are of unusual length; the left foot has a short little toe, caused by absorption of the metatarsal bone; the third and fourth toes are webbed. At the umbilicus of the larger child is a placental-shaped mass, 3½ x 4½, convex outwardly, to which is attached a cord which went to a normal placenta. The umbilical mass is firm and lobulated.

The smaller child has a protuberance springing from the back of the neck, which is suggestive of spina bifida. It is soft, apparently contains fluid, and measures 4 x 3. The larger child has, apparently, an imperforate anus. Between the left thigh of the larger and the right thigh of the smaller is the vulva, having an undeveloped labium majus upon the right side.

SECTION OF THE DISEASES OF CHILDREN.

J. A. LARRABEE, M.D., of Louisville, Ky., Chairman.

TUESDAY, JUNE 25TH.

THE CHAIRMAN, DR. J. A. LARRABEE, read a short

INTRODUCTORY ADDRESS,

referring in eloquent terms to the labors of the members of the Section and to the historic associations of the place of meeting. Pediatrics, he said, is not a forced specialty, torn from the tree of medicine. The diseases of infancy and childhood have something in common with the diseases of adult life—nomenclature—but differ so widely in course, duration, and consequences as to be fitly the subject of especial study. Still, as in Addison's vision of the bridge of life, the pitfalls are thickest at the entrance, and much that would assist to reduce infant mortality might be learned through the labors of a committee on vital statistics of infancy, to be appointed each year and to report at a stated time.

He also referred to the subject of infants' foods, and to assertions made by certain manufacturers tending to throw discredit upon the Section, and advised the passage of a law prohibiting the publication by manufacturers of expressions of opinion made in the Section.

On motion, a vote of thanks was extended to the Chairman, and a Committee, consisting of Drs. Love, Brush, and Watson, with the Chairman, was appointed to consider and report upon the recommendations contained in the address.

DR. T. B. GREENLEY, of West Point, Ky., then read a paper on

THE MANAGEMENT OF INFANTS DURING THE FIRST YEAR.

Improper food, neglect, unsanitary surroundings, and infanticide are, he said, the great causes of infant mortality. Syphilis kills a large majority of those dying in the first two months of life. Licensing and inspection of prostitutes would diminish this disease. Among the recommendations made, were the wearing of caps and bandages, and, when artificial feeding is necessary, the use of cow's milk undiluted, in order that the stomach should not be unduly distended by the excessive amount needed if diluted.

DR. SEARS, of Texas, had no doubt that proper food, clothing, and ventilation would diminish early mortality. He agreed with the reader that the commencement of life was all important. Some children starve in the midst of plenty through ignorance on the part of mothers as to the time, quantity, and manner of feeding. He thought flannels should be worn until the seventh year of age.

DR. WILLIAM PERRY WATSON, of Jersey City, objected to the wearing of caps by infants. Keep the head cool and the extremities warm. There is no reason why an infant should have a simple tonsillitis or laryngitis, any more than a simple nasal catarrh; but we know very well that, except in syphilitic cases, we do not have snuffles. If head and neck are left uncovered, children grow up less liable to croup and sore throat, etc.

DR. CHRISTOPHER, of Cincinnati, thought it incorrect to say "no snuffles without syphilis."

DR. WATSON qualified his remark by saying that if the head is left uncovered, very few non-syphilitic infants have nasal troubles.

DR. CHRISTOPHER referred to the advice of the reader of the paper to take sick children to the country. All were familiar with the improvement that change of air wrought, especially in weak and bottle-fed children. Bowel troubles, prone to recur, disappear on change of location. In institutions we are careful to disinfect stools, etc., but in private homes we are not likely to think it necessary. Is there not an infected atmosphere here, too, from which, when removed, the child naturally recovers?

DR. BRUSH, of Mt. Vernon, N. Y., thought it unnecessary to feed milk to infants during the first two or three days. Very few mothers have milk until the third day. He objected to the recommendation of milk and lime-water in cholera infantum. In cities the first thing is to stop milk at once.

DR. LATIMER, of Baltimore, thought that where the infant starts free from disease and parents are healthy, the child should be put to the breast within a few hours and continue at stated intervals. As a substitute for mother's milk, cow's milk is the most available. He preferred Meigs's method of preparation, after which it should be sterilized. The quantity must be determined by observation, as children differ greatly. To nurse infants more than once or twice during the night is injurious both to the mother and the child.

DR. FARRINGTON, of New York, does not feed the newborn infant—the child cries not from hunger. It is well to put it to the breast every two hours, to establish good habits.

DR. GREENLEY said that his recommendation as to caps was meant only to apply to the winter season; especially in the district in which he practised was it necessary. His recommendation of milk and lime-water in cholera infantum was as a medicine to allay nausea, not as a food. He excludes all food during the acute symptoms.

SECOND DAY—WEDNESDAY, JUNE 26TH.

DR. PETER HOOPER, of Philadelphia, read a paper on

THE INTESTINAL DISEASES OF CHILDREN DURING HOT WEATHER.

He advocated the abstraction of heat from the patient by cool bathing, cold drinks, cracked ice in the mouth, ice bags to head, spine, and abdomen. Lumps of ice should be placed in the room to cool the air. Enemata of tepid or medicated water to wash out the colon were advised in cases attended by offensive discharges. In cholera infantum there should be absolute rest and abstinence from food for twenty-four hours. The best treatment is prophylaxis. Cow's milk is the best artificial food, and in some cases undiluted. Plenty of cool, fresh air with moderate sunshine, but without exposure to direct rays of sun. Flannels should be worn the year round, and an abdominal bandage day and night. The child should be bathed every night and every morning.

Probably the heroic treatment of the future will be to open the bowel and wash it out.

Inunctions of warm oil soothe and nourish, allay restlessness and diminish fever. Pepsin used in intestinal diseases should be soluble and free from inspissated mucus.

DR. S. SOLIS-COHEN, of Philadelphia, commended the use of cold water and ice, internally and externally, as advised in the paper, rather than chemical antipyretics, which are usually depressing agents, in cases where reduction of temperature is indicated.

DR. LARRABEE believed it to be important to distinguish between the various diseases under discussion. Are they all of the same etiology and do they admit of the same treatment? In cases due to heat, thermal diarrhœa, there is no agent equal to cold. He differed from Dr. Hooper in his understanding of the term cholera infantum. Cholera infantum does not have green, slimy, lumpy stools. It is probably caused by a ptomaine, and it is the analogue of cholera in the adult. Suddenly the child is seized with purging and vomiting. There are profuse watery discharges. There is a serous exosmosis, and, in young infants, the fontanelle sinks and the expression is changed. The child becomes pinched, blue, and cold. It lingers, sinks, and finally dies.

Cases of this kind must be differentiated from thermal diarrhœa. The treatment must be applied instantly. We cannot wait to get rid of the ptomaine, or to make the bowel aseptic. For ten years or more he had treated such cases by immediate hypodermatic injection of morphine and atropine. About $\frac{1}{200}$th gr. of the former, and a very minute dose of the latter. He dissolved in an ounce of water a pellet consisting of $\frac{1}{4}$ gr. of morphine and $\frac{1}{60}$th gr. of atropine, and used about ten drops in a child a year old. The treatment had been thoroughly successful. It changed the osmosis. To correct the local conditions no drug excels calomel. We use it as an antiseptic, our fathers used it to move the liver. The explanations differ, but the result is the same. He objected to bandages. In entero-colitis evacuation is the proper treatment, but he preferred salines to relieve the strangulation of the vessels, according to the best surgical practice in peritonitis. Inunction of oil does more than simply lubricate and protect, it is a stimulant to the peripheral nerves.

DR. I. N. LOVE, of St. Louis, said that diseases of infancy are due to interference with and interruption of nutrition. The first month is the most important. Next to a wet nurse for an infant deprived of its mother's breast is a good healthy cow, or goat. The milk should be sterilized according to the plan of Rotch, by steaming in bottles to 180° F., and then tightly closing the bottles.

But in some cases artificial food must be used, because milk cannot be digested however prepared. Mellin's and Carnrick's foods had given him satisfaction, as had Bovinine in some cases. If feeding is properly accomplished, we would not have to discuss treatment of intestinal diseases. Mercurial treatment is the best. Cool baths should be given at proper intervals, and cool sterilized water to relieve thirst and prevent over-feeding. He advocated the flannel bandage, and confirmed Dr. Larrabee's reports of the good effect of morphine and atropine hypodermatically in cholera infantum.

DR. W. PERRY WATSON referred to the practice of exposing the legs of children for fashion's sake as productive of disease. He keeps the extremities and the abdomen covered, the head cool. In many cases milk, no matter how prepared, cannot be retained. He stops it and uses a remedy which he learned from Dr. Brush, oatmeal water with a little salt and sugar. It is given cool, in small quantities and at frequent but regular stated intervals. In the meantime, if the child cries, a teaspoonful of hot water may be given as often as necessary. Cholera infantum usually follows other diseases, but may occur suddenly. It usually comes on the third or fourth of a series of hot days. The best treatment is preventive.

DR. BRUSH said that by visiting cow pastures one could predict the occurrence of epidemics of cholera infantum in the cities. There are certain weeds cows avoid in cool weather when grass is plenty—lobelia, buttercup, poison ivy, etc. Little clumps are left on the field. But after two or three days of hot weather these clumps disappear, the poisons taken in by the cow are excreted in her milk, and that is one cause of cholera infantum in bottle-fed babies. The treatment is to stop the milk and give chloroform in emulsion with castor oil and gum arabic. It is a stimulant to prevent collapse, a disinfectant and an analgesic. He differed with Dr. Love as to the use of commercial foods. Some of these are largely made with waste products of various industries, as the refuse roe from salmon canneries, whey from cheese factories, etc. One, which had been mentioned, was largely made up of the blood from slaughter houses, whiskey being the preservative.

Now, with such a food we cannot tell whether the animals, from which it came, were healthy or diseased. But if we get meat we can examine it for ourselves, and then make a beef preparation in such a way as we may prefer. We should always be able to prepare, in the patient's house, whatever food is needed, from milk, or from cereals, or starches, or meat.

DR. MEYER, of New York, referred to the confusion of terms, looking upon cholera infantum as a very rare disease. Morphine with atropine was the remedy. He had never found occasion for the use of commercial, artificial foods.

DR. LOVE said he would use commercial foods like drugs with great discretion, and never when other means were available and equally efficacious. They were tools, and he could not always stop to manufacture his tools. If he found a good tool in the shops it was better to buy it and use it properly. Again, we must take homes as we find them. We could not trust home manufactures in every instance. Manufacturers of infant's food were men, and he would be sorry to learn that human nature was so base as to put filthy refuse products on the market for so sacred a purpose as the feeding of infants. No terms were too severe to condemn such action, but he did not believe that all manufacturers were morally torpid.

The Committee on Nominations reported the following nominations for

OFFICERS FOR THE ENSUING YEAR.

President, I. N. Love, of St. Louis,
Secretary, E. F. Brush, of Mt. Vernon, N. Y.,
and they were unanimously elected.

DR. F. E. WAXHAM, of Chicago, forwarded a paper entitled

INTUBATION OF THE LARYNX WITH REPORT OF CASES,

which was read by the Chairman.

Dr. Waxham reported 60 additional cases with 28 recoveries, or 46.66 per cent., which, with cases previously reported, made his record to date 210 cases with 79 recoveries, 32.89 per cent. The cause of the greater success latterly was not unnecessary operation; on the contrary, nine-tenths were done as a last resort, some of the children being moribund. As to medicinal treatment, of 19 cases that had corrosive sublimate before and after intubation, 9 recovered, 47.36 per cent; of 28 cases treated with the same drug only after operation, 14 recovered or 50 per cent., while of 13 cases that had not been given the drug at all, 5 recovered, or 38.46 per cent. The type of disease was not different. The improvement in the method of feeding, namely, having the child drink in the inclined position with the head down was the greatest factor in the increased success. The artificial epiglottis was now unnecessary. Another element was a more watchful care. A frequent cause of death had been detachment of membrane beneath the tube, choking the windpipe. By using a tube with less swelling it was more easily expelled and the membrane would also be coughed out. Large tubes fitting tightly, therefore, are dangerous. No danger was to be apprehended from expulsion of the tube, if the operator or a competent substitute could be summoned quickly to replace it. Partial detachment of membrane would be indicated by hoarse cough, when the tube should be at once removed. The membrane would then be expelled. The operations were all but one for membranous laryngitis. An exceptional case was one of laryngeal stenosis with measles. The patient died.

Age.	Number of Cases.	Number of Recoveries.	Percentage of Recoveries.
Under 2 years	11	3	27.27
Between 2 and 3 years	8	2	25.
" 3 " 4 "	9	4	44.44
" 4 " 5 "	17	8	47.05
" 5 " 6 "	4	3	75.
" 6 " 7 "	3	3	100.
" 7 " 8 "	5	4	80.
" 8 " 9 "	2	1	50.
12 years	1	0	0.
	60	28	46.66

The youngest patient was six months; it died. The cases of recovery under two years were aged fifteen, eighteen, and eighteen months respectively.

DR. GAY, of Boston, said that at the Boston City Hospital the statistics were slightly in favor of the older operation, but the new prevails as being, on the whole,

easier to do. In some cases none have been able to get the tube into the larynx. It requires as much help, as there is as much danger of the patient dying under the hand of the operator as in tracheotomy. 10 cases in 310 of tracheotomy had died from ether, shock, prostration, or hemorrhage. In intubation an equal number of deaths occurred from strangulation and shock. Even if deposited with the utmost care, there was a moment of strangulation with every intubation. If it did not immediately pass off, the tube should be removed and the membrane will be coughed out. By persistently trying to force in a tube which always causes a strangulation life might be lost. When the stenosis was not relieved by the tube, or swallowing was impossible, or the tube constantly coughed up, tracheotomy was indicated in the majority of cases. In 32 cases in which intubation failed and tracheotomy was then done, 3 recovered. The type of disease influenced the result very much. There was no fixed treatment aside from operation. He had used bichloride faithfully for two years. At one time he thought more recovered, but now he said that the facts do not warrant any conclusion. Feeding is very important. In intubation it should be done with the child lying down, and on one side. There was no pathological evidence that the inspiration of food causes death. All know how the tracheal tube became jammed up. The intubation tube did not. It became blocked below but not lined with membrane.

Outside the hospital Dr. Gay did intubation among poor people who could not properly care for the tracheotomy tube. He saw the child as often as he could. A certain number were and would always be lost from inability to find the operator at the time of blocking of the tube or when it was coughed out. On the whole, intubation was the better operation in ordinary cases.

DR. DENNISON, of Colorado, thought it needful to inquire into the effect of annihilation of the function of the larynx in intubation as well as in tracheotomy. Pulmonary complications caused seventy per cent. of the deaths. He had performed intubation twenty-five times with seven recoveries. Nine of the eighteen deaths were due to œdema of the air cells from aspiration of the blood toward the lungs while breathing was suspended. In Colorado they had to breathe five times more in the minute to get sufficient oxygen on account of the lower air pressure (twelve pounds instead of fifteen pounds, as at sea level) and this affected little children remarkably. In his fourteenth case he noticed that the pulse was weak during inspiration and strong during expiration. The blood could not get out of the thorax while the latter was distended with entrance of air impeded. He operated and recovery ensued. Where aspiration of blood has already occurred before operation recovery is almost impossible. Death ensues from œdema in twelve to thirty-six hours; average twenty-six hours. We need to study this question to get the best results from the operation.

DR. BRUSH said that he had found Dr. O'Dwyer modestly at work in the hospital, had asked and obtained permission to publish the results, and had gone enthusiastically into the practice of intubation. His record was twenty-three operations with one recovery, the latter the only one in his own practice. Recently he had intubated an adult, who was relieved but died twelve hours later. It was a mistake to persevere in attempts to put the tube in, when there was great difficulty. It was necessary for the operator to examine the case and refuse to intubate when there was pulmonary œdema, for in such cases no relief is afforded and the operation lost prestige. Even when children died, the parents admitted the relief, and were willing to commend the operation for that reason. He doubted the entrance of food into the lungs. It was the ineffectual cough which set up the irritation, causing pneumonia when there was not an extension of the disease in the throat.

DR. LARRABEE had had experience with tracheotomy only, with twenty-five per cent. of recoveries. No two subjects admitted of such equal balance of opinion. If the dangers of tracheotomy were a Scylla, those of intubation were a Charybdis. It was said that intubation was less difficult. This arose from personal experience. Certain men possessed or acquired a technical facility, like Tait in laparotomy or Waxham in intubation; but others could not attain the same brilliant results. To him intubation was far the more difficult operation. It was more popular with families because it was bloodless. Operations were reported indiscriminately whether for croup or diphtheria. But a distinction should be made. Membranous croup is a local disease—an exudation without sepsis. Diphtheria is a systemic infection. In croup we operate and cure; in diphtheria we relieve but one symptom and have the disease still to fight. Tracheotomy gives the better prospect because it interferes less with alimentation. It did not require cessation of medical treatment, of the iron, internally, externally, eternally, on which he depended, with food and whiskey, for the cure. The pressure of the membrane still left below the tube is unfavorable. For infants under two years, and in croup, intubation held first place; but tracheotomy in older children with diphtheria. As to the blocking of the tracheal tube by covering it with a sponge moistened with hot water, or by proper arrangement to keep up steaming, this could be avoided. Too much importance was attached to pneumonia. He was in the habit of medicating through the trachea, pouring down a drachm of a solution containing chlorinated soda, and found the cough it excited beneficial in causing expulsion of membrane.

The condition alluded to by Dr. Dennison was present, but not due to either intubation or tracheotomy. It was found when no operation had been performed. Tracheotomists were familiar with the venous turgescence caused by the non-return of venous blood, and how often timid operators had suffered the child to die by trying to arrest hemorrhage from such distended veins, when by opening the trachea the condition could be at once relieved.

DR. HENRY D. CHAPIN, of New York, then read a paper on

PSEUDO-MEMBRANOUS RHINITIS.

Can there be a croupous inflammation of the nasal mucous membrane entirely apart from a manifestation of diphtheria he asked. Schwalbe, in 1871, reported the case of a boy, five weeks old; and Hartmann, in 1887, reported six cases in children from three to seven years, in which casts of the nasal passages were expelled or removed, consisting of pseudo-membrane microscopically indistinguishable from diphtheria. Other reported cases were alluded to, which occurred both in children and adults, and two original cases were added to the list.

Dr. Chapin's patients were sisters, aged two and three years respectively. The latter was first attacked, and presented the most marked manifestations. Two weeks before coming under observation, a discharge from the nose began, and was accompanied by coughing and sneezing. General condition was good. There was no fever. The nose was packed with fibrous material, the throat only congested. For the next few days shreds of membrane were thrown off from the nose, and on several occasions large masses were detached with forceps. Bleeding followed. Temperature was but slightly elevated. There was so little disturbance, except from nasal stenosis, that the parents would not confine the children to bed, and they played around as usual. The urine was never albuminous. In view of the entire absence of sepsis while the nose was packed with membrane, which, if infectious, would soon have poisoned the whole system, the author concluded that the disease was not diphtheria, notwithstanding that the microscopic examination showed no difference between the pseudo-membrane and that of diphtheria.

DR. S. SOLIS-COHEN, of Philadelphia, referred to the great variety of forms of pseudo-membranous inflammation of the air-passages, and to pseudo-membranous enteritis, and thought the peculiar response of mucous membranes to different sources of irritation sufficient to explain Dr. Chapin's and other cases, without any necessity for calling in the aid of a specific poison.

DR. COCHRAN, of Massachusetts, reported cases of extension of diphtheritic casts of the nasal chambers. Diphtheria might be localized in the nose, or extend to the throat, and death or recovery might take place in either case.

DR. LARRABEE thought the matter of identity of all pseudo-membranous inflammations could not be settled by mere microscopic identity of the product. The clinical history was equally important, and herein great differences existed. Any irritation might produce it, or a specific poison might give rise to local and general infection. In the one case the patient got well with removal of the membrane, in the other it continued to form again and again, even on scratches of the body. Croup was not epidemic, it came with the vicissitudes of weather and changes of temperature. Diphtheria comes as infection, and spreads from child to child, and from house to house.

DR. CHAPIN said that Dr. Cochran's cases were quite different from his. Nasal diphtheria was an infectious disease, and when matter filled the nose without causing infection, we could argue that it was not of an infectious nature.

DR. C. R. EARLEY, of Pennsylvania, read a paper on

SCARLATINA.

He doubted its contagious character, and urged sanitary precautions as prophylactic means. He denied its identity with diphtheria, and referred *in extenso* to the various sequelæ and their treatment, it being important to recognize the cause. The treatment of cases of scarlet fever varied with the locality and the season. In mild cases very little interference was needed. He gave ipecac as an emetic, with caution, and administered cooling drinks freely. In the anginose form he used chlorate of potash, oil of turpentine, quinine, carbonate of ammonium, with free use of cold water and ice to the throat. As a gargle, chlorate of potassium, capsicum, and chloride of sodium, or sulphate of zinc, creasote, and myrrh; or chlorate of potassium, chloride of sodium, bichloride of sodium, and gum acacia. To prevent gangrene he used ergotine with camphor, iodine, and glycerine. Several cases were given in support of the various propositions advanced.

THIRD DAY—THURSDAY, JUNE 27TH.

DR. S. P. DEAFHAFE, of Potsdam, O., read a paper on

POLIOMYELITIS ANTERIOR ACUTA.

He had seen five cases. He considered it an acute inflammatory affection of unknown origin. Cold and dentition are doubtful causes. Nothing indubitable is known of a specific microbe. We cannot trace heredity. Onset with fever may be abrupt. One lower extremity is most frequently affected, the temperature of the part becoming subnormal. Diagnosis and treatment were discussed at length.

DR. KING, of Chicago, had seen three cases in adults, in whom it was possible to obtain symptoms not seen in children. The bladder was always paralyzed, but recovery was prompt. Tactile sensation was unaltered. In early stages electrical treatment did harm. When but one extremity was affected the lesion was upon the opposite side of the cord, yet the knee-jerk of the apparently sound side would be absent.

THE CHAIRMAN spoke of the difficulties in diagnosis, especially with regard to rheumatism. He had formed a low estimate of the therapeutic value of electricity.

DR. I. N. LOVE, of St. Louis, read a paper on

ONE YEAR OF ACETANILIDE IN PÆDIATRIC PRACTICE.

He considered acetanilide superior to all of the carbolic acid series. He believed it better to use the name given in the title in preference to that of "antifebrin." He considered it three times more effective than antipyrin and less depressing. If it does diminish the red blood-cells, it does so slowly after long administration. Depressing effects came from poor makes of the drug. He agreed with Widowitz in his view of its safe and steady action with children. He did not believe that the disagreeable cyanosis was of especial importance, and it could be obviated by combining with alcohol. He made mention of the use of the drug in scarlet fever, measles, and congestive fevers. The author spoke of the treatment of fifty cases of whooping-cough, and thought it a valuable remedy. He also mentioned its use in convulsions and chorea. In conclusion, the writer stated that acetanilide, carefully guarded and properly used, is a safe and reliable remedy in the diseases of infancy and childhood. It is preferable to antipyrin, because it does not cause so much depression and its effects last longer. The cyanosis is not dangerous, though it is a disagreeable feature. It is of value in controlling temperature in various fevers caused by the typhoid germ, malaria, or the exanthemata. It serves almost as a specific in whooping-cough by mitigating the discomforts and controlling paroxysms. He was opposed to the sale of these carbolic drugs over the counter.

DR. DIXON, of Kentucky, had given it, followed by quinine, in malarial fevers. In whooping-cough he preferred antipyrin.

DR. HILL, of New Hampshire, had seen good effects from acetanilide in asthma.

DR. KING, of Chicago, related a case of cerebral tumor, in which large doses had been given—twenty grains at one time—for relief of pain.

DR. WATSON, of Jersey City, thought it better not to do anything in self-limited fevers.

DR. ATKINSON, of Baltimore, had not seen the impure drug. He did not think it could modify the fever process, though it could contribute to the comfort of the patient.

DR. OSLER, of Baltimore, had given acetanilide in the cold stage of fever, but he believed that it was useless.

DR. LOVE, in closing, said that cyanosis was best treated by giving alcohol at the same time with the drug.

AMERICAN NEUROLOGICAL ASSOCIATION.

Fifteenth Annual Meeting, held at Long Branch, N. J., June 26 and 27, 1889.

JUNE 26TH.—MORNING SESSION.

THE PRESIDENT, E. C. SEGUIN, M.D., called the Association to order.

DR. MORTON PRINCE, of Boston, presented a paper on

MALARIA AS A CAUSE OF DEGENERATIVE DISEASE OF THE SPINAL CORD.

He spoke of the frequency of tabes and other spinal degenerations in cases which also presented a history of malaria. The first case he had recorded was one of locomotor ataxia with typical tabetic crises before each malarial chill. Another had gastric crisis regularly once monthly, and another crisis beginning with rigor and followed by diarrhœa, this occurring every three weeks. The latter case had been diagnosticated as malaria by the family physician. Altogether the author reported in detail six cases, showing the coexistence of tabes with malaria; and six cases in which the malarial history was associated with disseminated sclerosis. Besides these he had notes of three other cases of multiple sclerosis, two of locomotor ataxia, and one of lateral sclerosis with a similar relation. Generally the malarial poison was present in the system previous to the development of spinal symptoms. He pointed out coincidences in the course of syphilis and malaria, such as the slowness of action of the poison and amenability to treatment; and also called attention to the relation of the syphilitic virus to tabes. He had found but little to support his etiological theory in literature. Erb, following Schulze, had stated that tabes may occur as a sequel to intermittent fever. Tuczek had proven that tabes could be caused by the ergot parasite. Many nervous disorders are undoubtedly due to malaria, such as neuralgias, anæsthesias, severe psychoses, etc. He alluded to the deposition of pigment in the brain in some cases of pernicious malaria. It would be very important for many army pensioners if it could be definitely determined that tabes and sclerosis might be sequelæ of malaria.

DR. N. F. BRILL said that his attention had never before been directed to the possibility of such a relation, but he thought the details presented were rather too meagre for an absolutely correct decision to be made in the matter. As neuritis and malaria were frequently associated, possibly some of these spinal cases might be coincident in the same manner. Both malarial and cord disorders are very common.

DR. L. C. GRAY saw no reason why the malarial poison should not cause spinal diseases. We do not yet know the exact character of the poison. But there is a sort of periodicity in many spinal and cerebral disorders, as well as in peripheral nervous affections, which is often as marked as that of fever and ague. He had noticed this particularly in intracranial syphilis. Some of these neuropathies were even relieved by quinine, as he had observed in cases of tabes. When we speak of latent malaria and rest our diagnosis merely upon periodicity, there is danger of error. If Laveran and Councilman were right in their discovery of the malarial germ, this should be looked for in such cases as the author had described, in order to corroborate with certainty the diagnosis. Improvement or recovery under the use of quinine was no criterion.

DR. E. C. SPITZKA saw nothing in the nature of the case to forbid an etiological association between malaria and cord disorders, but he agreed with the preceding speakers that sufficient proof of such relation had not been adduced. To show an etiological significance, it was necessary to present absolute and intrinsic proof of it. If it could be shown that, as in syphilis, there were at the time of the malarial attack nervous symptoms, it would be a different matter. In the secondary fever of syphilis there was absence of the knee-jerk. Most nervous symptoms in malaria were of a neuralgic character. The anæsthesias differ from those of tabes. It had been found that pigmentary thrombosis or embolism were the most frequent causes of serious nervous disturbances in malaria. He believed, however, that, like any other cachexia, antecedent malaria might predispose to spinal affections. He had observed a case of paretic dementia of the tabetic type which was probably influenced etiologically by severe malaria.

DR. H. M. LYMAN, of Chicago, could recall but two cases where it had been intimated to him that the origin of tabes had been malarial. In one he traced the actual cause to a subacute spinal meningitis coming on after exposure to wet and cold. The other case instead of being true tabes had proved to be a rheumatic neuritis. He had in his experience seen nothing to support the idea of a malarial etiology in tabes. A complete and perfect history together with a microscopical examination of the blood should be required for an indisputable diagnosis of malaria.

THE PRESIDENT could not recall a single case of tabes or multiple sclerosis which presented any relation to malaria.

DR. PRINCE thought there could be no question as to the correctness of diagnosis as regarded the nervous symptoms in his cases, and as to the antecedent malaria; all of his cases were men who had been in army service, and he had documentary proof of their having suffered from that poison in the shape of government records. The really doubtful question was whether the malarial poison still existed in the system at the time of the development of the spinal disorders. In some of them there was evidence of its persistence in the shape of typical malarial rigor and pyrexia. He did not consider his etiological explanation decisive, but merely suggestive.

DR. SPITZKA thought that there were many cases of nervous disease owing their origin to exposure during the

war which were contemptuously rejected by the Pension Bureau. It seemed to him that the Association ought to call the attention of the government to the great injustice that might be done.

THE PRESIDENT, although once an army surgeon, and, therefore, prejudiced in favor of the soldiers, had been on the contrary struck by the vast number of fraudulent nervous cases which were awarded pensions.

ELECTIONS AND RESIGNATIONS.

Drs. W. M. Leszynski, of New York, C. Eugene Riggs, of St. Paul, N. S. Upson, of Cleveland, H. A. Hare, and J. P. C. Griffith, of Philadelphia, were then elected to active membership; and Mr. Victor Horsley and Dr. David Ferrier, of London, were elected to honorary membership. The resignation of Dr. A. D. Rockwell, of New York, was accepted.

AFTERNOON SESSION.

DR. B. SACHS, of New York, reported a case of

NUCLEAR OPHTHALMOPLEGIA WITH POLIOMYELITIS (POLIOENCEPHALITIS SUPERIOR AND POLIOMYELITIS).

The relation between these two forms of disease which had been suspected by Hutchinson, Mauthner, and others was proven by this case. But one other was on record, that of Seeligmuller. The history of the patient was briefly that a ptosis of the right eye gradually developed, followed after a few months by ptosis of the left eye also, and soon after a paresis of all the external ocular muscles of both eyes appeared. This resulted in almost absolute fixation of the right eye, but left a slight inward and upward movement of the left. There was immobility of the left pupil to light, but not to accommodation. The right could not be examined because of corneal opacity. During the development of this nuclear ophthalmoplegia, a subacute poliomyelitis affecting the entire right leg supervened. There was now marked atrophy of the entire right leg. The knee-jerk was lost on both sides. There were no sensory disturbances. There were no tabetic symptoms, and the patient's condition was normal in all other respects. This case proved that the affection of the nuclei in the floor of the third and fourth ventricles was due to the same pathological process which gives rise to poliomyelitis when it affects the gray matter of the cord.

DR. SPITZKA said the report of the case had been so complete and there being but one other such case on record, it did not admit of either criticism or comparison. He referred to Thomsen's case of unilateral nuclear paralysis, where there was a gummatous infiltration on both sides, and the explanation of which was to him quite impossible.

DR. SACHS asked if fibres could be traced up through the ciliary nuclei.

DR. SPITZKA answered in the affirmative and made blackboard drawings illustrative of their course.

DR. J. J. PUTNAM, of Boston, then presented, through Dr. W. N. Bullard, a skull which was a remarkable example of

HYPEROSTOSIS CRANII.

The case had been reported to the Association two years ago. The patient was a woman, thirty-one years old at death. The chief symptoms were headache, broadening of the head, dropping out of the teeth, loss of hearing, vertigo, beginning gradually some years ago. There was extreme exophthalmos. There were no retinal changes. Extensive pachymeningitis was discovered at the autopsy. There was thinning and atrophy in parts of the skull. The orbital cavities were greatly diminished in size. Virchow considered hyperostosis cranii due to inflammatory changes. In this case probably the inflammation originated at the ear. Dr. Putnam had a patient now with similar symptoms, in whom the exostoses were first noticed in boyhood, and he desired the opinion of members as to the justifiability of removal of certain exostoses for the relief of pain. Dr. Bullard himself thought it might be difficult to determine which of the exostoses produced the pain. Some of the exostoses were very diffuse and the operation might have to be extensive.

THE PRESIDENT believed that the pain would be more apt to originate from basal lesions, possibly dural inflammation about the issuing nerves. The jaw in this case was interesting because of its senile conformation and angle, despite the youth of the patient.

DR. W. M. LESZYNSKY, of New York, read a paper entitled

SPONTANEOUS DEGENERATIVE NEURITIS OF THE BRACHIAL PLEXUS.

The patient was a laborer, aged thirty-eight. He first had pain in the left shoulder, shooting down the arm, which was ascribed to exposure to wet. There was then no involvement of the shoulder-joint and the motility of the arm was unimpaired. All the muscles reacted well to faradism, except the deltoid, which was atrophied. There was no sensory disturbance, but there was pain on pressure. Gradually other muscles became paralyzed, until a large number of the arm muscles were useless. The paralysis was accompanied by pain so excruciating that the patient could not sleep at night. A feeling of numbness extended from the shoulder down the arm over the radial distribution, and a gradual anæsthesia and analgesia supervened throughout the same area. The faradic excitability disappeared, and there was galvanic hyper-excitability. Then he began gradually to improve, and will ultimately recover. The case was remarkable in its severity, in its idiopathic origin, and in the escape of the median and ulnar nerves from the inflammatory process. Not more than one case had to his knowledge been found in literature.

DR. PRINCE thought it would be difficult in the early stages of such a case to distinguish it from progressive muscular atrophy of the shoulder type. He recalled a case of his own in which there was every reason for considering it to be neuritis. It began with cramps such as are observed in writer's cramp, and it was several years before other symptoms proved the case to be one of progressive muscular atrophy. The most common cause in such cases as the author's was traumatic arthritis, but generally the results are slight.

DR. W. R. BIRDSALL had seen this case before, and was impressed with the idea that it might be a periarthritic affection, but the author's careful study of the case seemed to exclude this. He recollected that at that time there was some ankylosis of the shoulder-joint in the case.

THE PRESIDENT considered the study of the differing

resistances in the healthy and diseased arm, made by the author, interesting, and asked if any member had had experience in such measurements.

DR. GRAY had noticed much variation in resistance in many of his patients from day to day.

DR. STARR had measured the resistance in Basedow's disease, and had found it to vary within a thousand ohms in the same cases from time to time. Electricity was diffused through muscular better than any other tissue. The chief resistance was in the skin. Probably but little of the current permeated nerves, and hence alterations of nervous tissue would not have much to do with the variations mentioned by the author.

DR. G. M. HAMMOND stated that it was well known that the resistance differs from day to day in animals. He asked if in this case it had been measured for a number of times, and was answered that eight trials had been made.

DR. BIRDSALL thought the question of resistance had little to do with our study of disease. It was easy to explain the numerous variations by the wide differences in vascularity and moisture of the tissues at different times. It might be due, in this case, to paralysis affecting the physical condition of the tissues. The saturation of the epidermis by perspiration would explain the variations mentioned by Dr. Gray. He had made measurements in cases of Basedow's disease some time ago, and believed the diminished resistance found, to be due to the moisture of the skin. It could not depend on dynamic conditions in the nervous system, but was purely a matter of physics about which there was no great mystery.

DR. GRAY said the explanation by moisture of the skin was not applicable in his cases. The differences which he had observed were not owing to the humidity of the atmosphere, although atmospheric conditions might possibly induce dynamic changes in the body.

DR. SACHS pointed out that on one day the author's case showed 580 ohms increase on the diseased side, and on another day 1170 ohms increase on the sound side. Such variations evidently had little to do with the pathological process in the patient. Eulenberg had measured the resistances in cases of paralysis agitans and of Basedow's disease, but without any practical results. As such measurements were very complex they required exceedingly great care.

DR. PRINCE objected to the use of the palm of the hand for precise experimentation, owing to the great variability of the thickness of the skin, and consequently of the resistance. He thought the forearm ought to be used.

DR. LESZYNSKY had not brought forward the question of resistance, in this case, as a diagnostic symptom. It was increased in the affected arm at every examination. With subsidence of the symptoms the resistance gradually diminished, but there was a difference between the sound and morbid side throughout the disease. As to the question of moisture, there was excessive perspiration upon the paralyzed arm, while the normal arm was dry, in spite of which the resistance was greater upon the former. He thought it better to place the electrode upon the wrist than in the hand. There was no antecedent traumatism in the case; the roughening of the shoulder-joint was the result of the paralysis.

DR. M. ALLEN STARR, of New York, then presented a specimen of an

INTERPEDUNCULAR MYXOSARCOMA.

It lay in the middle cranial fossa in the median line, between the crura cerebri, which it separated. It extended into the lateral ventricles, separating widely the caudate nuclei and optic thalami. The patient was a male, aged twenty-one months at death. At the age of thirteen months, in October last, a lateral nystagmus had been observed in both eyes, varying from time to time. Drs. Knapp and Roosa found a slight pallor of the optic disks, which they considered normal. Later, exophthalmos developed, gradually increasing until death. Convergence of the eyes was impossible, although no paralysis of a cranial nerve was discoverable. The reflexes of the iris were lost. Toward the middle of April, this year, the child became unable to walk. The knee-jerks were exaggerated; there was ankle-clonus and typical spastic rigidity. Finally, the back could not be held up, and later the head could not be supported. There was gradual emaciation. There was no apparent headache. From time to time the scalp was congested. About this time the pallor of the optic disks indicated atrophy. There was no blindness, no hemiopia, no aphasia, as far as could be ascertained in so young a child. Toward the middle of May ataxia of the arms developed, but without loss of muscular power. June 8th vomiting and Cheyne-Stokes respiration came on, and the child died in nine hours. The diagnosis of tumor had been made, but the question of localization was of great interest. Nystagmus was not a localizable symptom, but had been found most frequently in lesions of the corpora quadrigemina. The exophthalmos indicated intra-cranial pressure, the gait disturbance led one to think of a cerebellar lesion, while the ataxia of the hands pointed to a basilar trouble affecting, symmetrically, either the pons or the medulla. The question of operative interference had been considered, but he had opposed that proposition because of the difficulty of localizing the tumor. The autopsy proved that the pons was not even pressed upon, and that the cerebellum was normal. There were twenty ounces of fluid in the ventricles. He would ask if there was any localizing value in nystagmus or exophthalmos, and what was the probable cause of the ataxia?

THE PRESIDENT, in referring to the question of ataxia, recalled a case of remarkable bilateral ataxia with optic atrophy, where a large interpeduncular tumor was found between the crura. He thought such ataxia was to be accounted for by pressure upon the motor tracts or motor nuclei. To him the most puzzling feature of Dr. Starr's case was the absence of blindness. As to the nystagmus, it had as yet, in his opinion, no localizing value. He had seen two cases with lesions of the quadrigeminal bodies, but without nystagmus.

DR. LESZYNSKY said the child may have had only central vision, which might explain the presence of nystagmus, but Dr. Starr answered that the visual fields were normal.

DR. SACHS was reminded of Meynert's case of tumor in both optic thalami, with ataxia similar to that of Dr. Starr's case. He thought the thalami might have been pressed upon in the latter, but still was not sure that would cause the ataxia. He considered nystagmus very frequent in many central disorders of children.

DR. H. M. LYMAN referred to a case he had seen re-

cently of defective cerebral development in a child where there was also nystagmus.

DR. GRAY asked how a diagnosis of intra-cranial tumor had been made so early in this case, and was answered that the diagnosis had not been made until all the symptoms described had made their appearance.

DR. HAMMOND thought ataxia depended upon injury to the optic thalami or corpora striata, and referred to a case of Weir Mitchell's, in which there was a remarkable unilateral ataxia with a lesion of the optic thalamus and corpus striatum upon the opposite side.

DR. LESZYNSKY saw a child several years ago with a well-marked nystagmus, which disappeared in the course of time. There was no discoverable cause.

(*To be continued.*)

CONGRESS OF THE GERMAN SOCIETY OF SURGERY.

Eighteenth Annual Session.
Held at Berlin April 24th to 27th, 1889.

(Concluded from vol. liv. page 695.)

DR. PIETRZIKOWSKI, of Prague, in a paper on

PNEUMONIAS CONSECUTIVE TO STRANGULATED HERNIA.

Comparatively often do we observe pneumonia as a result of inflammation of the peritoneum, and in particular after kelotomy for strangulated hernia. In old people one might think of hypostatic pneumonia, or of a pneumonia due to the penetration of vomited matter into the air-passages; but in another series of facts these two suppositions are not admissible, especially when we have to deal with strong and powerful young men. Gussenbauer thought that these pneumonias were due to partial emboli which started from thrombosed intestinal blood-vessels. If those emboli contain no microörganisms, a simple inflammation is produced which is rapidly cured; but if they are derived from a strangulated loop, they determine deep lesions which end in lobar or lobular pneumonia. If we look over the hospital records we find that this pneumonia is produced in 8 per cent of the cases of operation. But if patients are carefully examined we find light pulmonary manifestations in 30 and even in 50 per cent. of such patients. In the majority of cases the affection is only a simple infarct, and the pulmonary signs disappear in from eight to ten days; in other cases, however, the disease takes the form of pneumonia or pleurisy. Gussenbauer's theory is sustained by this observation, that the pulmonary phenomena come on especially when a strangulation has lasted a very short time. In such cases the clots have not had time to adhere to the parietes. On the contrary, pneumonias are very rare when the strangulated loop has become gangrenous and the circulation has been interfered with. In such cases we must make an abdominal fistula, and in such cases the pneumonia is much more rare than after simple kelotomy. Jaundice is quite a frequent symptom as a result of the reduction of a strangulated hernia; it can also be explained by emboli which have been arrested in the liver; this fact is often confirmed by the post-mortem.

As a result of his experiments on dogs, in which he made artificial strangulated hernias, he found in ten animals on which the operation succeeded, parenchymatous alterations of the lungs and sometimes of the liver, due to emboli enfarcts. In a few cases he was able to demonstrate the formation of a thrombus in the intestinal vessels. The thrombus reaches the lung by the portal venous system and by the inferior vena cava.

DR. THIEM, of Kottbus, had observed on two occasions pulmonary infarcts after the reduction of a hernia; still he did not think it was a special complication, for he had observed the same pulmonary accidents after the total extirpation of the gall-bladder and of the uterus.

PROF. KÜMMEL, of Hamburg, then read a paper on

OPERATIVE TREATMENT OF HYPERTROPHY OF THE PROSTATE GLAND.

He had performed on six patients a partial extirpation of the hypertrophied prostate gland. His cases were very grave, as they had resisted all other methods of treatment. There was fever, bronchitis, and considerable vesicular dilatation. In such cases the operation is indicated, while it is the contrary when the kidneys are seriously involved or when there is a complete paralysis of the bladder. In this last case the operation is useless, for even after the suppression of the obstacle, spontaneous micturition cannot be reëstablished. To extirpate the prostate gland he performs superior cystotomy; the bladder is very carefully washed out, and he then destroys, by the aid of the thermo-cautery, not only the median lobe, but also all the parts of the gland which project into the bladder. He then sutures the bladder, and allows Nélaton's sound to remain in it. Out of six patients, one died from collapse, in another the operative result was negative, four are cured and can urinate spontaneously.

PROF. SOCIN, of Bâle, said that most of the symptoms from which prostatic patients suffer depend, not upon the hypertrophy of the prostate gland, but upon a concomitant vesical catarrh. We know that even very considerable hypertrophies of the prostate gland are sometimes followed by negative symptoms, while very small hypertrophies cause very considerable suffering. All depends on the state of the bladder. If one succeeds in curing the cystitis, most of the troubles disappear, even without interference. The good results which sometimes follow extirpation of the prostate gland, are due probably more to the washing out of the bladder and to the sound left in position—that is, to the treatment of the cystitis—than to the operation itself. The cystitis is the first enemy to combat in the treatment of prostatic patients.

PROF. THIERSCH agreed on every point with Dr. Socin; he, moreover, called attention to the fact that the median lobe of the prostate is sometimes very useful to certain patients, in whom it prevents the outflow of urine by closing the entrance of the urethra; hence the extirpation of the middle lobe can make the patient worse instead of better.

PROF. MIKULICZ then spoke of

TURPENTINE AS AN EXCITANT FOR THE PRODUCTION OF OSSEOUS TISSUE.

He exhibited a patient in whom the whole tibia had become necrosed. Repair had taken place, except for a distance of about two inches, where there existed a large fibrous cicatricial cord containing periosteal remains. He thought of stimulating the vitality of the periosteum and making it reproduce bone in sufficient quantity to remedy the deformity of the limb. To do

this he made in the persistent fibrous cord several longitudinal sections, between the lips of which he interposed turpentined gauze, which was changed every ten days, by this means he obtained a comparatively large bone.

PROF. V. BERGMANN said he had not obtained any good results from employing turpentine, as just recommended.

DR. HAHN, in a similar case to that of Prof. Mikulicz, where the fibula had been saved and two inches of the tibia were absent, implanted the fibula into the tibia.

PISTOL-SHOT WOUND OF THE ABDOMEN.

DR. BRAMANN presented a young man who received a pistol-shot in the left epigastric region. Three hours after the wound he could detect the presence of liquid in the abdominal cavity. The man was seized with collapse. Laparotomy was then performed; the ball had perforated a loop of small intestine and wounded a large artery, which had produced quite a hemorrhage. The artery was ligated. The points of entrance and exit of the ball in the intestine were found absolutely closed by the intestinal mucous membrane; even by pressing on the perforated loop no gas or intestinal contents could be made to come out. No sutures were made; no washing of the abdominal cavity; the blood clots alone were removed. The patient was cured after the first dressing. He thought it unnecessary to use the American method to know if the intestine has or has not been wounded. The method consists in introducing hydrogen gas by the rectum. If the intestine is perforated the hydrogen will come out by this opening into the peritoneal cavity, which it again leaves to come out by the wound which exists in the abdomen to reach the exterior. If this takes place, a lighted match placed at the point of entrance of the ball will light a jet of hydrogen gas, which will demonstrate the perforation.

PROF. SOCIN said that according to experiments made by a French surgeon on dogs which were fasting, the state of the stomach at the time the wound has been inflicted is of the highest importance. It is only when the intestine is empty that the mucous membrane will be able to reverse itself and close the points of entrance and exit of the ball.

Adjourned.

NEWS ITEMS.

Free Libraries and Contagion.—It implies no real disparagement of the great advantages connected with public libraries that books issued by them are occasionally to be found in houses where infectious disease is prevalent. The possibility of risk thus incurred is inevitable unless the system of book-lending throughout the country is to be done away with. A few days ago it was announced in the daily press that four books from a free library had been discovered in a house where one child had fever; and the case, as we know from recent experience, is not singular. Instances of the same kind must have occurred since the earliest period at which books were placed in circulation. Some persons, perhaps, under the guidance of a timid over-zeal for health, might condemn the free library itself as a virtual source of contamination. In our opinion this would be to caricature precaution. With almost equal reason might we forbid to infected households all necessary intercourse with tradesmen who supply their daily wants. The real remedy is not to be found in any superfine theorizing, but in more practical measures. These must include the compulsory notification to librarians of infectious disease among the families of their readers, the thorough disinfection or destruction of books already exposed to the taint of disease, and the temporary restriction of any further issue to the homes of infected persons.—*Lancet*, May 4, 1889.

The British and American Pint.—According to the *British Med. Journal*, the attention of the Midland Counties Chemical Association was lately called to the indeterminate character of the pint measure in use among pharmacists, or, as it was put, the doubt as to the meaning of the abbreviation *Oss.* Our contemporary remarks, however, that all ambiguity ought to have been cleared up by the General Medical Council's distinct statement that twenty fluidounces constitute a pint. Inasmuch as our American apothecaries' pint consists of only sixteen fluidounces, it will be well for prescribers and dispensers to bear the disparity in mind.—*New York Med. Journal*, May 11, 1889.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 25 TO JULY 1, 1889.

CORSON, J. K., *Major and Surgeon.*—The leave of absence for one month, granted by Par. 2, S. O. 65, *c. s.*, Department of the Columbia, is extended one month.—Par. 1, *S. O. 45, Headquarters Division of the Pacific*, June 24, 1889.

CHAPIN, A. R., *Captain and Assistant Surgeon.*—Is granted leave of absence for twenty-five days, to commence on or about July 2, 1889.—Par. 6, *S. O. 145, Division of the Atlantic*, June 27, 1889.

By direction of the Secretary of War, EZRA WOODRUFF, *Major and Surgeon*, is relieved from temporary duty at Fort Monroe, Virginia, and will report in person to the commanding officer at Fort Hamilton, New York, for duty at that station.—Par. 5, *S. O. 146, A. G. O.*, June 25, 1889.

By direction of the Secretary of War, the extension of leave of absence granted WALTER W. R. FISHER, *Captain and Assistant Surgeon*, in S. O. 41, June 12, 1889, Division of the Pacific, is still further extended fifteen days.—Par. 8, *S. O. 146, A. G. O., Washington*, June 25, 1889.

HOFF, JOHN VAN R., *Captain and Assistant Surgeon.*—Is relieved from duty at Fort Reno, Indian Territory, and ordered to Fort Riley, Kansas.—Par. 6, *S. O. 145, A. G. O., Washington, D. C.*, June 24, 1889.

BACHE, DALLAS, *Major and Surgeon.*—Is relieved from duty at Fort Riley, Kansas, and ordered to report to the commanding general Department of the Platte, for duty as Medical Director of that Department.—Par. 6, *S. O. 145, A. G. O., Washington, D. C.*, June 24, 1889.

By direction of the Secretary of War, leave of absence for two months is granted GEORGE T. BEALE, *Captain and Medical Storekeeper.*—Par. 8, *S. O. 148, A. G. O.*, June 27, 1889.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY, FOR THE WEEK ENDING JUNE 29, 1889.

SIEGFRIED, C. A., *Surgeon.*—Detached from the U. S. S. "Quinnebaug," and wait orders.

CURTIS, *Passed Assistant Surgeon.*—Detached from the U. S. S. "Quinnebaug," and wait orders.

SMITH, GEORGE T., *Assistant Surgeon*—Ordered to the Army and Navy Hospital, Hot Springs, Arkansas.